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To

Dear Sir

National Guard Manual.

BY

STEPHEN R. PINCKNEY,

Col. 95th N. Y. National Guard.

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THE SCHOOL MANUAL.

THE SCIENCE OF MILITARY SIMPLIFIED.

What is military?

Military is the art of organizing, disciplining, and maneuvering an army.

How is it divided?

Into two branches.

What are they?

Tactics and strategy.

Define the meaning of tactics.

It is a system of handling troops under rules prescribed by governments, for their exercise and training.

Explain what strategy is.

It is the art of concerting a plan of campaign, combining a system of military operations, offensive and defensive.

What constitutes an army?

An effective body of troops having all the appliances of war for attack or defense.

ORGANIZATION.

What does an army consist of, in the United States?

Of infantry, cavalry, artillery, riflemen, engineers, and pontoniers.

What is infantry?

Light troops acting as a moving battery.

What is cavalry?

Mounted troops.

What is artillery?

Troops assigned to operate with different species of cannon.

What are riflemen?

Troops drilled for skirmishing.

What are engineers?

A corps organized for surveying positions for defense, for the examination of roads and routes by land or water, and for the construction of roads and bridges for the use of the army.

What is topography?

The art of surveying and drafting the natural condition of places.

What department of the army has this duty in charge?

The topographical engineers.

What are pontoniers?

A corps especially assigned to the charge of, and management of, portable bridges, made of India-rubber or boat floats.

INFANTRY.

Which is the most important branch of the army?

Infantry.

Why?

Because it is more capable of endurance, and can be maneuvered on every ground.

What proportion is it of an army?

Four fifths.

How is infantry divided?

It is divided into "infantry of the line," "light infantry," and "riflemen."

What is infantry of the line?

Troops organized as bodies, and moving in masses.

How are they classed?

Into divisions, brigades, regiments, battalions, and companies.

What is a division?

It consists of two or three brigades?

How many regiments constitute a brigade?

Two or more.

How many companies are there in a regiment?

Ten. The proposed change in our army is the French system of 3 battalions, of 8 companies each, with 2 additional majors.

What number of companies are there in a battalion?

Two or more.

What constitutes a company?

Sixty-four officers, non-commissioned officers, and privates.

OFFICERS.

Who commands a division?

A major-general.

What officer commands a brigade?

A brigadier-general.

Who commands a regiment?

A colonel.

Name the officer in command of a battalion.

A major.

Who commands a company?

A captain.

What other officers are attached to a company?

First and second lieutenants.

What is the meaning of a commissioned officer?

It is a soldier imposed with command, under the authority of government, by the power of a commission.

What is a non commissioned officer?

Soldiers serving in the ranks, having authority and command by virtue of a warrant given by the colonel.

How many are there in a company?

Nine.

What are their titles?

First or orderly, second, third, fourth, and fifth sergeants; and first, second, third, and fourth corporals.

What are the duties of the sergeants?

To act as guides and instructors.

What are the corporals' duties?

To act as the base of the front rank.

LIGHT INFANTRY.

What is light infantry?

Troops selected for picket and outpost duty.

What is the outpost?

It is the nearest approach to the enemy.

Explain what the picket is.

It is a detachment of cavalry or infantry whose principal duty it is to guard an army from surprise.

What is an advanced guard?

A detachment of troops which precedes the march of the main body.

State what a rear guard is.

A detachment marching in the rear of the army

to protect it from the enemy and to pick up straggling soldiers.

RIFLEMEN.

What are riflemen?

Troops disciplined in the practice of sharp-shooting.

What are they used for?

As skirmishers or advanced troops, to annoy the enemy.

How are they organized?

In companies.

CAVALRY.

What is cavalry?

Mounted soldiers, second in importance to infantry.

What is it used for?

For watching the enemy, and assisting the infantry and artillery on the advance or the retreat.

How is it organized?

Into regiments, squadrons, and companies.

What comprises a regiment?

Five squadrons.

How many companies are there in a squadron?

Two.

How many men constitute a company?

Sixty.

OFFICERS.

What field-officers are there in a cavalry or artillery regiment?

One colonel, one lieutenant-colonel, and first and second majors.

How many officers are there in a cavalry or artillery company?

One captain, one first lieutenant, a junior and senior second lieutenant.

How many sergeants to a company?

Eight.

ARTILLERY.

What is artillery?

An arm of the service designed to use mountain, field, and heavy ordnance.

How is it divided?

Into siege, garrison, sea-coast, and mountain artillery.

What is siege artillery? [Plate 1.]

Cannon carrying from 18 to 24 pound shot, for attack on places.

What is garrison artillery? [Plate 2.]

Guns employed in the defense of earth-works.

Explain what sea-coast artillery is.

Guns of the heaviest caliber in forts, carrying from 32 to 42 pound shot, and 8 to 10 inch shell.

ORGANIZATION.

How is garrison artillery organized?

By regiments, batteries, and companies.

What constitutes a regiment?

Four batteries.

How many guns and men are in a battery?

Six guns and 110 officers, non-commissioned officers, and privates.

ARTILLERY DESCRIBED.

What is mountain artillery? [Plate 3.]

Light howitzers, mounted on light hand carriages and on the back of horses.

How are mountain howitzers placed on horses' backs?

On a pack-saddle.

Describe a howitzer.

It is a chambered cannon used for projecting shell or canister and grape-shot.

What is a mortar? [Plate 4.]

Mortars differ from guns in the construction of their bore, their chamber being in the shape of a frustrum of a cone, by which means the powder is confined and the shell fits close to the sides.

Describe a columbiad gun.

It is an American cannon, invented by Colonel Bumford, of very large caliber, used for throwing solid shot or shell. It is mounted on a high carriage with traverses, and is used in forts and water batteries.

What are its peculiar advantages?

That it acquires a vertical field of fire from 5° depression to 39° elevation, and a horizontal field of 36°.

What are the dimensions and weight of one of them?

The 10-inch weighs 15,400 pounds, and projects a shell of that size. Its length is 126 inches.

GUNS DESCRIBED.

Do you know the size of Rodman's columbiad gun? [Plate 5.]

Its length is 190 inches, its weight 49,100 pounds, and carries a shot weighing 320 pounds, 5,790 yards.

What description of guns have been introduced in the army recently?

Rifled cannon.

How are they constructed?

With smaller cylinders, grooved, for the purpose of obtaining a longer range and more accuracy in fire, by carrying a conical ball.

Describe Wiart's cannon.

It is made of steel, welded together, then turned, drilled, and rifled.

How far will it carry a shot?

Four and a half miles with accuracy.

How are cannons rifled?

By cutting a groove one inch wide and three quarters thick in the interior of the chamber, making one twist in six feet.

WEIGHT OF SHOT.

What description of shot are discharged from siege and garrison guns?

12, 18, and 24 pound shot.

What is thrown from sea-coast columbiads?

32 and 42 pound shot.

How heavy is the shot of a siege or garrison howitzer?

8-inch shell and 24-pound shot.

What description of shot is discharged from a sea-coast columbiad?

8-inch and 10-inch shot.

What is the weight of a 12-inch shot?

283 pounds.

What is the weight of a 13-inch mortar shell?

197 pounds.

What is the meaning of windage?

The difference between the true diameter of the bore and the ball.

What is meant by the "piece?"

Any species of cannon that is mounted on a carriage.

What is a caisson?

It is an ammunition-wagon which follows a piece on the field.

What is the limber of a piece?

The fore part of the gun-carriage, connected to the piece by a pintel.

What is understood by the caliber of the piece?

The diameter of the bore.

What is a battery?

It is a term applied to one or more pieces, or to the place where they are served.

What size rifled cannon are used in the service?

3 inch and 4½ inch.

How do they prove guns?

By heavy charges of powder ignited by a fuse, to prevent danger.

How much powder is used?

15-inch columbiad, 50 pounds of powder and 1 shell; 12-pounder, 4 pounds of powder, and 3-inch rifled with 1½ pounds of powder and a 11-pound shot.

What is the best method of spiking a gun?

Drive in the vent a hardened steel spike or file.

MORTARS.

How many kinds of mortars are there?

8 and 10 inch siege, 10 and 18 sea-coast, 16-inch stone, and 24-pound Coehorn.

What is a Coehorn mortar?

It is made of a composition of brass and other metal.

DESCRIPTION OF PROJECTILES.

What are the usual projectiles used in warfare?

For unrifled ordnance, solid shot or shell; for howitzers, canister, grape, and spherical case, which may be used either in rifled or unrifled cannon.

What other combustibles are used?

Hand-grenades, light and fire balls, rockets, carcasses, and shell-fuses.

PROJECTILES.

Describe a shell. [Plate 6, fig. 1.]

It is a hollow iron shot with a hole to receive a fuse. It is charged with sufficient powder to burst it, and is ignited by the fuse.

How is canister-shot made? [Plate 6, fig. 2.]

It is a tin cylinder attached to a wooden block, and filled with cast-iron shot; between the block and shot is the cartridge, which bursts the cylinder when it is discharged.

What are grape-shot? [Plate 6, fig. 3.]

A certain number of cast-iron balls put together by means of two cast-iron plates, two rings, and one pin and nut, used in 8-inch howitzers and columbiads.

Describe what spherical case-shot are. [Plate 6, fig. 4.]

It is a thin shell of cast-iron, containing a number of musket-balls, and a charge of powder sufficient to burn it; a fuse is fixed to it as in a shell, by which the charge is ignited.

COMBUSTIBLES.

How are hand-grenades made?

They are made of iron, in the form of a cylinder,

filled with bullets and charged, having a fuse, and used to throw into field-works.

What is a light and fire ball?

Light balls are of an oval shape, formed of sacks of canvas, filled with combustible composition used to light up forts. Fire-balls are loaded and used to light the enemy's forts.

Describe a rocket.

It is composed of a strong case of paper or sheet iron, containing niter, charcoal, and sulphur. The head is either a solid shot or shell. They are usually fired from tubes on light carriages.

What is a carcass?

Combustible composition inclosed in globes, formed with iron hoops, canvas, and cord, thrown from a mortar, and used in bombardments or firing shipping.

Explain the construction and uses of fuses.

They are made of paper, wood, or metal inclosing a burning composition, attached to the hole of a shell, and burn about one inch in five seconds.

GUNPOWDER.

How is gunpowder made?

By a composition of 76 parts of saltpeter, 14 of charcoal, and 10 of sulphur.

How is it manufactured?

The charcoal and sulphur are put together in a rolling barrel, and rolled for one hour. The saltpeter is then added, and rolled for three hours longer. It is then placed in a rolling-mill, made of two cast-iron cylinders, rolling around a horizontal axis in a circular trough, 9 inches in diameter.

How heavy are these cylinders?

About 8 tons each.

How is gunpowder made into the different qualities?

By pressing it into cakes, then mashing it by teeth-rollers, and sifting it in different-sized sieves.

How is it dried for use?

By spreading it out on sheets, attached to frames, in a room heated by steam to a temperature of 160°.

How is it tested?

By firing three rounds from a musket, or discharging a 65-pound solid shot from an 8-inch columbiad with a 10-pound charge.

How many qualities of gunpowder are there?

Four—musket, mortar, cannon, and mammoth.

Are they all made alike?

Yes: with the exception of the size of the grain.

What are the general charges used?

For a 10-inch columbiad, 15 pounds; for a 42-pound siege gun, 9 pounds; and for a 10-inch howitzer, 12 pounds.

How much is used in projecting shells?

For a 10-inch shell from a columbiad, 3 pounds; and from an 8-inch mortar, about 2¾ pounds.

What is the usual proportion?

For solid shot about quarter the weight of the shot.

MATCHES, FUSES, AND PRIMES.

What is a slow match?

A prepared rope of flax, soaked in sugar-of-lead, twisted hard and dried; when lighted, it burns 4 inches in an hour.

Explain what a quick match is.

It is made of cotton yarn of seven strands, soaked in a solution of gum-arabic and spirits, and a

paste of powder applied successively and rolled into cord. It will burn 1 yard in 13 seconds.

How is a fuse made?

It is a small tube of wood, either beech or oak, with a hole in the center; it is driven into a shell, then filled with a composition, and has a paper fuse attached, which ignites as it leaves the mortar or cannon, and burns at the rate of 10, 14, or 20 seconds before exploding the shell.

How are percussion-caps made?

They are made of copper, pressed into circular shape, which is filled with 2 parts of fulminate of mercury and 1 part niter. To protect the powder from moisture, it is covered in each cap with shellac varnish.

How much material does it require for 1,000,000 caps?

1,000 pounds sheet copper, 42 pounds mercury, 336 pounds nitric acid, 382 pounds alcohol, 24 pounds niter, and 10 pounds gum shellac.

FORTIFICATIONS.

What are field-works?

Any constructions which have for their object to impede the advance of an enemy, or to enable an inferior force to maintain their position against the attack of a superior number.

What do they generally consist of?

An embankment of earth, called a "parapet," and an excavation on the exterior side, called a "ditch."

What is the general height of a "parapet?" [Plate 7, fig. 1.]

Seven feet six inches.

What is the usual thickness of a "parapet?"

Three feet at the top, and ten or twelve feet at the bottom.

What is the depth and width of the ditch?

Six feet deep and ten feet wide.

How deep does a musket-ball penetrate a loose earth?

Ten to eighteen inches.

How deep does a 6-pound cannon-ball penetrate?

Three and a half to four feet.

How deep does a 9-pound shot penetrate?

Six to seven feet.

How deep does a 12-pound shot penetrate?

Eight to ten feet.

THEIR TITLES.

What are the titles of the different species of earth-works?

Redans—single, double, and triple redans, with auxiliary flanks; lunettes, redoubts, star forts, bastioned and demi-bastioned forts, block-houses, and line intrenchments, such as tenailles and cremaillères.

What is the redan? [Plate 7, fig. 2.]

The redan is a work with two fronts or faces, forming with each other a salient angle. Triple redans are two connected, the flanks being lengthened.

What is the lunette? [Plate 7, fig. 3.]

A large redan, with parallel flanks.

What is a star fort? [Plate 7, fig. 4.]

Shapened as a star, having several angles.

What is a redoubt? [Plate 7, fig. 5.]

An inclosed work, either square or circular, having no angles.

What are bastion works? [Plate 7, fig. 6.]

A fort having a flanking fire, with angles to cover each face or front.

TEMPORARY FORTS.

What is a block-house?

A covered field-work made of tree-trunks and logs, a protection from the Indians, rectangular in form.

What other works are formed as a part of defense?

Chevaux de frise, abattis, trous-de-loups, entanglements, crow's-feet, common fougasses, shell fougasses, and stone fougasses.

How is a chevaux de frise constructed?

It is a beam of wood, square or hectagonal, having pointed stakes or swords inserted into the face. They are used as temporary barriers to impede the passage of a breach, or to block up a street.

Describe an abattis.

Large boughs or entire trees are laid down in a line, with the butt ends buried three or four feet in the ground, with the branches toward the enemy. The small branches are cut off—the large ones sharpened to a point.

What are trous-de-loups?

They are holes dug in the ground in the form of a cone, about six feet wide and six feet deep. A pointed stake is planted at the bottom to prevent them being used for rifle pits. They are dug in rows.

MATERIAL FOR EARTH-WORK.

What is used for making a parapet?

Gabions, fascines, sand-bags, and sometimes sods of turf.

What are gabions?

Strong cylinder baskets, open at both ends, two feet in diameter, and 30 inches high.

How are they used?

By being stood on end and filled with earth, and then riveted in the ground by pointed stakes.

What are fascines?

Trees 8 or 9 inches in diameter, and from 6 to 9 feet long.

How are they used?

By placing them on frames the shape of a St. Andrew's cross, then filling the intervening space with brushwood, and tying it round the fascines. This forms a solid brushwood; which is used for sustaining the bank of earth.

How are sand-bags made?

They are common bags of coarse canvas, measuring 30 by 16 inches, which, when filled with sand, form a good embankment.

How is turf used?

They are cut in sods 4 inches thick, 16 inches long, and 8 inches wide, and when piled upon each other, form a good defense.

MINES AND OBSTRUCTIONS.

Can you describe what entanglements are?

They are formed by cutting half through the stems of small trees, and pulling the upper parts to the ground, to which they are made fast.

What are crow's-feet?

They are 4 iron spikes, joined together at angles; when they are thrown on the ground, their points are up. They are used to obstruct the advance of cavalry.

How are fougasses made?

They are small mines, from 3 to 10 feet deep;

powder and shell are deposited in these mines, and exploded by a fuse connection from the surface.

INFANTRY.

Define the school of the soldier.

It is that part of the science of military which teaches the recruit how to become the soldier.

How many parts are there in the "school of the soldier?"

Three parts.

What is the first part?

The position of the soldier without arms; eyes right, left, and front; facings; principles of the direct step in common time, quick time, double quick time, and the run.

Explain what the second part is.

Principles of shouldered arms, manual of arms, loadings, firings, direct, oblique, by file and by rank, to fire and load, kneeling and lying, and bayonet exercise.

What is the third part?

Union of eight or twelve men for instruction in the principles of alignments, the direct march, the oblique march, and the different steps; the march by the flank, the principles of wheeling, and change of direction; long marches, and double quick time and the run, with arms and knapsack.

SCHOOL OF THE SOLDIER.

Define the position of a soldier.

Heels on the same line, as near each other as the conformation of the man will permit.

The feet turned out equally, forming with each other less than a right angle.

The knees straight, without stiffness.

The body erect on the hips, inclining a little forward.

The shoulders square, and falling equally.

The arms hanging naturally.

The elbows near the body.

The palm of the hand turned a little to the front, little finger behind the seam of the pantaloons.

The head erect and square to the front, without constraint.

The chin near the stock, without covering it.

The eyes fixed straight to the front, and striking the ground about the distance of fifteen paces.

Why are the heels on the same line?

Because if one were in rear of the other, the shoulder on that side would be thrown back, or the position of the soldier would be constrained.

What are the heels more or less closed for?

So that men who are knock-kneed, or who have legs with large calves, can not, without constraint, make their heels touch while standing.

Why are the feet turned out at an angle?

Because if one foot were turned out more than the other, a shoulder would be deranged; and if both feet be too much turned out, it would not allow the body to lean forward and stand steady.

Why are the knees extended without stiffness?

If they were stiffened, constraint and fatigue would follow.

What is the object of the body being erect on the hips?

On account of its giving an equilibrium to the position.

Why is the upper part of the body inclined forward?

Because recruits are generally disposed to project the stomach and throw back the shoulders, distressing them much in marching.

Why are the shoulders square?

If the shoulders be advanced beyond the line of

the breast, the back would be arched or round-shouldered; the soldier could not align himself nor use his piece with ease.

What is the little finger turned behind the seam of the pantaloons for?

Because it is necessary to turn the elbows in to the body, to prevent the soldier from occupying more space in the rank than necessary.

Why is the face straight to the front?

If it were otherwise, stiffness would follow; this would be communicated to the whole body, and it would give pain instead of ease.

What is the object of having the eyes direct to the front?

Because it is the surest means of maintaining the shoulders in line.

FACINGS AND THE STEP.

What are the facings?

Turning the body to the right or left when in line.

What is "about face?"

Turning to the rear while in line.

What is the meaning of the direct step?

Marching direct forward.

What is the oblique step?

Marching at an angle to the right or left.

What is the length and quickness of a direct step in common time?

Twenty-eight inches in length, and ninety steps to a minute.

What is the length and quickness of a direct step in quick time?

Twenty-eight inches in length, and one hundred and ten steps to the minute.

What is the length of the back step?

Fourteen inches.

What is the length and quickness of a step in double quick time?

Thirty-three inches long, and one hundred and sixty-five steps in a minute.

How is the musket carried on the double quick?

At the right shoulder and the trail.

THE STEP EXPLAINED.

What are the general principles of the step in marching?

Throw the weight of the body on the right leg at the command, "forward."

The toe depressed, but without restraint;
The toe and knee slightly turned out;
The upper part of the body forward;
The ham or thigh of the leg extended;
The feet passed near the ground;
The foot planted firm without shock;
The face or eyes direct to the front.

Why is the weight of the body thrown on the right leg?

In order to prepare for taking the first step smartly, which is essential in a body of soldiers.

What is the toe depressed for?

Because it extends the ham, and prepares the foot to come flat to the ground.

Why are the toes and knees slightly turned out?

If they were too much turned, the body would be unsteady.

What is the object of the upper part of the body being forward?

So that the weight may be thrown on the foot that is on the ground, that the foot in the rear may

be easily raised, and that the step may not be shortened.

Why are the hams extended in marching?

Because a rank can not march together, as each man would walk alone, without jostling and separating elbows.

Why is the foot passed near the ground?

If the foot were raised more than necessary, time would be lost and the soldiers fatigued unnecessarily.

What is the purpose of planting the foot flat without shock?

To avoid the wavering of the body, if the heel were landed first.

Why is the face or eyes kept to the front?

Because this position of the head prevents the shoulders from turning, and assures the direct march to the front.

THE MANUAL.

What is the manual of arms?

Movements in handling a musket, which comprehends its application to a soldier.

How is the manual taught?

To three men in a line, and afterward in file.

What is the time in executing the manual?

With the exception of the motions relative to the cartridge, the rammer, and fixing and unfixing bayonet, it is 90 motions to a minute.

What are the number of motions in the several movements in the manual?

Support—arms, from the shoulder,	3	motions.
Carry—arms, from support,	3	do.
Present—arms, from the shoulder,	2	do.
Shoulder—arms, from present,	2	do.

Order—arms, from the shoulder, 2 motions.
Shoulder—arms, from an order, 2 do.
Charge—bayonet, from the shoulder, 2 do.
Shoulder—arms, from the charge, 2 do.
Unfix bayonet, from the shoulder, 3 do.
Fix bayonets, do. do. 3 do.
Trail arms do. do. 2 do.

Right shoulder, shift—arms, from the shoulder, 2 motions.

Recover arms, from the shoulder, 1 motion.

Secure arms, from the shoulder, 3 motions.

Inspection of arms and fix bayonets, from order—arms, 2 motions.

TO LOAD.

How many times and motions are there in loading?

Nine times, and 15 motions.

What are they?

Load from the shoulder, 1 motion.
Handle cartridge, 1 do.
Tear do., 1 do.
Charge do., 1 do.
Draw rammer, 3 do.
Ram cartridge, 1 do.
Return rammer, 3 do.
Prime, 2 do.
Shoulder arms, 2 do.

FIRINGS.

How many motions are there in preparing to fire from the load?

Three times, and 5 motions.

What are they?

Ready from the shoulder, 3 motions.
Aim from ready, 1 do.
Fire from aim, 1 do.

How many motions are there in "recover arms," from aim?

One motion.

What are the general principles of direct firing?

To preserve steadiness and coolness; to avoid placing more than one charge in the musket at a time, and for the rear rank to step off to the right, in aiming.

What rules are to be followed in oblique firing?

As rear rank, in aiming to the right, to advance the left foot—and to the left, the right foot, eight inches from the heel next on the right or left, leaning forward.

What is the object of throwing back the shoulder?

In order to be able to direct the sight more or less obliquely, according to the position of the object aimed at.

Why is the left foot and upper part of the body of the rear rank men advanced?

In order to avoid accidents, as without this the pieces of the rear rank would not project beyond the front rank.

Why is the piece drawn back obliquely?

To avoid the necessity of raising it over the head of the front rank men.

MOVEMENTS DEFINED.

What constitutes a file?

Two men, one being behind the other, and 13 inches distant.

What constitutes a rank?

Two or more men alongside of each other.

What is the meaning of "flank?"

The ends of the company.

What is the pivot?

That portion which the wheel is made from, usually the guide.

What is the duty of a guide?

To keep the flanks of the company steady.

What is meant by the marching flank?

The end of the company opposite to the pivot.

What is the meaning of the term "dressing" forward or back?

The men moving forward or backward to establish a true line.

What is the position of the head in dressing?

It is turned to the right or left obliquely, as the base may be established.

ALIGNMENTS.

What are alignments?

A system of forming successive files in a line by marches and halts.

How are alignments established?

By placing ten or twelve men adjoining each other, and moving them to the front and rear direct or oblique.

What principles are generally taught?

That the men arrive steadily on the alignment.

That the body be not bent back, nor the head forward.

That the head be but little turned, just enough to see the line of the eyes.

That the alignment never be passed.

That at the command "front," all stand fast though the rank be not aligned.

That at the command, this or that file, "forward," or "back," all other files stand fast.

That in aligning to the rear, the men in falling back pass only a little behind the alignment.

What is the object in having the men arrive steadily on the alignment?

Because haste begets confusion and is opposed to good order.

Why is the body not to be bent back or the head forward?

It is only by regularity of position that a true line can be acquired.

Why is the head but little turned to align?

That in turning it too much it draws the shoulder with it.

Can not the alignments be passed?

No. If one man passed the alignment, he would oblige the remainder to do it also, occasioning thereby a fault and loss of time.

Why should all stand fast at the command "front?"

In order to give the men the habit of judging promptly, and to avoid shuffling.

Why is it that all the files should stand fast, when one is ordered to advance or retire?

In order not to derange the files which are aligned.

Why do the files in dressing backward, march a little to the rear?

So that they can see the true line better.

MARCHINGS.

What is meant by marching by the front?

Advancing in column, or in line, forward, viz., either by battalion, by division, by company, or platoon.

What is the general rule for marching by the front?

Touch lightly the elbow toward the guide.

Not to open out that elbow nor the opposite arm.

Yield to pressure from the side of the guide, and resist it from the other.

Recover, by insensible degrees, the slight touch of the elbow, if lost.

Maintain the head square to the front, no matter which side the guide may be.

To recover any ground lost or gained, gradually.

Why is the elbow touched lightly toward the guide?

By preserving this light touch, the line will be nearly true. While if one man should push, he would move another, and confusion would follow.

What is the object of not opening out the elbow?

In order that no one may press his neighbor, and all may occupy their places.

Why should a man yield to pressure from the side of the guide, and resist it from the other?

In order to avoid throwing the guide out of direction.

What is the object in recovering the touch of the elbow, insensibly, when it is lost?

Because, in gaining it suddenly, it may occasion a movement by other files which will tend to disarrange the line.

Why is the head kept to the front?

Because if the head were turned to the side, it would draw after it the body, giving thereby a false direction to the line.

Why should a man correct an error in the march insensibly?

If he were to move suddenly it would tend to disunite the ranks, causing his neighbor to take a step of 34 inches, while he would only take one of 28 inches.

What is meant by marching by the flank?

Moving by successive files, when faced to the right or left.

How does a soldier face to the right?

By raising the right foot clear of the ground and turning on the left heel.

How does a soldier face to the left?

By raising the right foot clear of the ground and turning on the left heel.

How does a soldier face about?

By placing the heel of the right foot three inches in rear of the left heel, raising the left foot and turning on both heels to the rear.

What is meant by march?

To move forward in any direction given.

What is changing direction?

Turning to the right or left while marching by the flank or in column.

MARCHING BY THE FLANK.

What rules are to be observed in flank marchings?

That the step be executed according to the principles prescribed for the direct step; that, at each step, the advancing heel of every following man be planted about six inches in advance of the opposite heel (yet on the ground) of the man immediately preceding; that (to avoid treading on the heels of the men who precede) the knees be not bent; that the head of the last file should cover those in front.

Why is the step the same as the direct step?

Because it is necessary in order to preserve a perfect harmony of movement.

Why is the advancing heel placed six inches in advance of the opposite man's heel, which is on the ground?

In order that the rank, marching in file, may be neither lengthened nor contracted.

Why are the knees not bent in marching?

Because bending them would occasion both a loss of cadence and distance.

Why should each man's head cover the preceding one's?

Because it is the most certain rule by which each man may maintain himself in the exact line.

WHEELINGS.

What are wheelings?

Movements in column or by the flank, to change the direction.

How many kinds of wheelings are there?

Two; from a halt, and on the march.

What are the general principles of wheeling on the march?

To the side opposite the guide.

What, at a halt?

To either side.

A company marching in column, with the guide left, would it wheel to the left?

No.

Why not?

Because it would not have a guide to conduct the marching flank.

How would you wheel a company to the left under these circumstances?

By changing the guide to the right before the wheel.

How is a wheel executed at a halt?

To either side.

What is the length of the step of the pivot man in wheeling on the march?

Nine or eleven inches.

What length of step does the marching flank men take?

A full step, according to the marching time.

What is it called when wheeling on a march?

Wheeling on a movable pivot.

What are the general principles of wheeling from a halt?

To turn the head a little toward the marching flank, and fix the eyes on the line of the men who are on that side; to touch lightly the elbow of the next man toward the pivot; to resist pressure from the side of the marching flank.

Why are the eyes thrown toward the marching flank?

Otherwise it would be impossible for each man to regulate the length of his step so as to conform his movement to that of the marching flank.

What is the object of touching lightly the elbow of the next man toward the pivot?

In order that the files may not open out in wheeling.

Why do you resist pressure from the side of the marching flank?

Because if this principle be neglected, the pivot, which ought to be a fixed point, in wheels from a halt, might be pushed out of its place by pressure.

What is the difference between a wheel from a halt and the pivot?

In a wheel from a halt, the touch of the elbow is toward the marching flank, while in the wheel on a pivot, the touch is to the guide or inner flank.

COMMANDS.

What is "attention—company?"

It is a command to bring the company, when at a rest, to the first position of a soldier.

How are commands given?

In a firm and distinct tone.

How many kinds of commands are there?

Three.

What are these?

The command of caution, preparatory command, and execution.

What is the word, "attention?"

It is a command of caution.

Why?

Because it forewarns the men to prepare.

What is, "company?"

A command of execution.

Why?

Because, in connection with attention, it completes the execution of the intended movement.

What is, "in place rest?"

It is standing at ease, the left knee being slightly bent, looking steady to the front, and preserving silence without movement.

What is, "rest?"

Remaining in the ranks, without preserving immobility.

What is, "attention?"

It is a command to bring the company when at parade rest, to the position of a soldier.

What is, "eyes right?"

It is casting the head to the right, obliquely, for the purpose of making a true line.

What is, "eyes left?"

It is casting the head to the left, obliquely, for the same purpose.

What is, "eyes front?"

It is resuming the position of the soldier.

MOVEMENTS OF THE COMPANY.

How is a company formed?

From right to left, according to size, the tallest on the right.

Which is the right flank?

The right-hand side when standing in line.

Which is the left?

The left-hand side when in line.

How is the company formed? [Page 105.]

In line, in two ranks, the tallest on the right

DIVISION OF THE COMPANY.

How is the company divided?

In the center, into two platoons.

How is each platoon divided?

Into two sections.

Which is the first platoon?

That on the right.

Which is the second?

The left platoon.

POSITION OF OFFICERS AND NON-COMMISSIONED OFFICERS

Where is the captain's position when the company is formed?

On the right in the front rank.

Where is the first lieutenant's position?

Two paces in rear of the centre of the fourth section.

Where is the second lieutenant's position?

Two paces in rear of the center of the first platoon.

Where is the third lieutenant posted?

Two paces in rear of the center of the second platoon.

Where is the first sergeant posted?

In the rear rank on the right, covering the captain.

Where is the second sergeant's position?

Two paces in rear of the rear rank, opposite the second file from the left of the company; he is the left guide of the company.

Where is the third sergeant posted?

Two paces in rear of the rear rank, opposite the second file from the right of the second platoon.

Where is the position of the fourth sergeant?

Two paces in rear of the rear rank, opposite the second file from the left of the first platoon.

Where is the fifth sergeant posted?

In the rank of file closers, opposite the second file from the right of the first platoon.

FILE CLOSERS.

Where is the rank of file closers?

Two paces in rear of the rear rank.

Who constitute this rank?

The first, second, and third lieutenants, and second, third, fourth, and fifth sergeants.

What is its object?

To preserve the steadiness of the rear rank, and to prevent disorder in the ranks.

Where are the corporals placed?

In the front rank, on the right and left of each platoon.

GUIDES.

How many guides are there to a company?

Two; one to each platoon.

Who is the left guide of the company?

The second sergeant.

Who is the right guide of the company?

The first sergeant.

Who is the guide of the first platoon?

The first sergeant.

What is the meaning of a column?

When one division, company, platoon, or section is marching in the rear of or behind another.

COMMAND.

Who commands the company?

The captain.

Where is his position in column by company?

Two paces in front of the center.

Who commands the second platoon?

The first lieutenant.

SCHOOL OF THE COMPANY.

How many lessons and articles are there in the school of the company?

Six lessons, each having five articles.

FIRST LESSON OF THE SCHOOL OF THE COMPANY.

What is the first article of the first lesson?

To open ranks.

Name the second article.

Alignments in open ranks.

State what the third article is.

Manual of arms.

What is the fourth article?

To close ranks.

Name the fifth article.

Alignments and manual of arms in closed ranks.

SECOND LESSON.

What is the first article of the second lesson?

To load in four times and at will.

Name the second article.

To fire by company.

What is the third article?

To fire by file.

State what the fourth article is.

To fire by rank.

What is the fifth article?

To fire by the rear rank.

THIRD LESSON.

Name the first article of the third lesson.

To march in line of battle.

What is the second article?

To halt the company marching in line of battle, and to align it.

State what the third article is.

The oblique march in line of battle.

What is the fourth article?

To mark time, to march in double quick time, and the back step.

Name the fifth article.

To march in retreat in line of battle.

FOURTH LESSON.

What is the first article of the fourth lesson?

To march by the flank.

State what the second article is.

To change direction by file.

What is the third article?

To halt the company marching by the flank, and to face it to the front.

Name what the fourth article is.

The company being in march by the flank, to form it on the right or left by file into line of battle.

What is the fifth article?

The company marching by the flank, to form it by company or platoon into line, and cause it to face to the right and left, and to file left and right in marching.

FIFTH LESSON.

State what the first article of the fifth lesson is.

To break into column by platoon either at a halt or while marching.

What is the second article?

To march in column.

Name the third article.

To change direction.

What is the fourth article?

To halt the column.

State what the fifth article is.

Being in column by platoon, to form to the right or left into line of battle, either at a halt or in marching.

SIXTH LESSON.

What is the first article of the sixth lesson?

To break into platoons and to re-form the company.

State what the second article is.

To break files to the rear, and to cause them to re-enter into line.

What is the third article?

To march in column in route, and to execute the movements incident thereto.

Name the fourth article.

The countermarch.

What is the fifth article?

Being in column by platoon, to form on the right or left into line of battle.

THE MUSKET.—(PLATE 8.)

How many principal parts are there to a musket?

Five.

What are they?

The barrel, the lock, the stock, the rammer, and the mountings.

How many subordinate parts are there?

Nineteen.

Name them.

The upper band, middle band, tail band, swell, guard, swivels, small of the stock, butt, heel of the butt, toe or beak of the butt, trigger, blade of bayonet, shank of bayonet, socket, clasp, lock-plate, hammer, main spring, and sling.

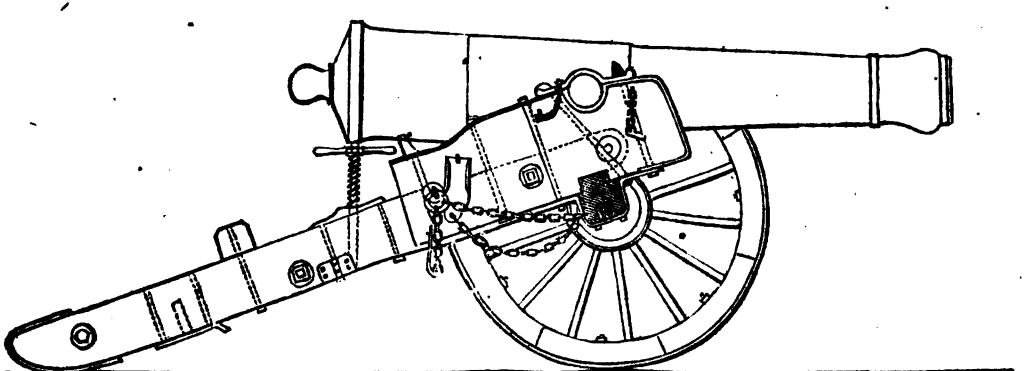
How many remaining parts are there?

Ten.

What are these?

The upper, middle, and tail pipe; head of rammer and little end of same; the muzzle, breech, bore, sight, and tang.

PLATE 1.



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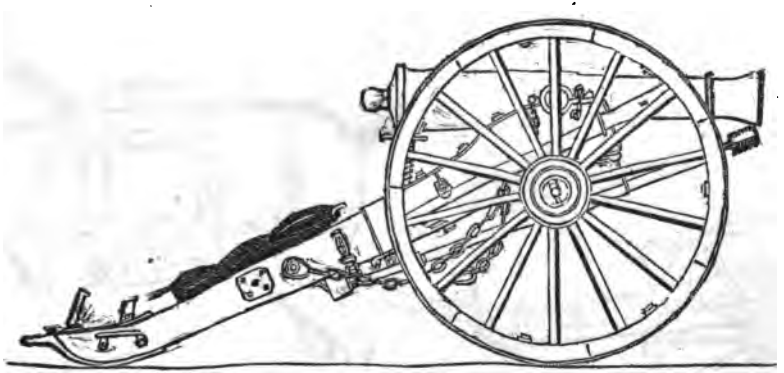

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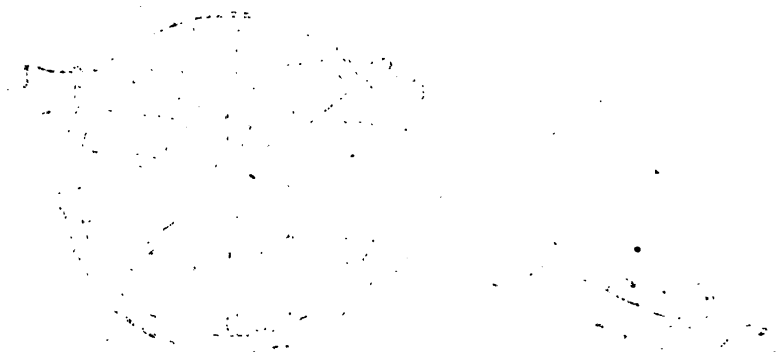

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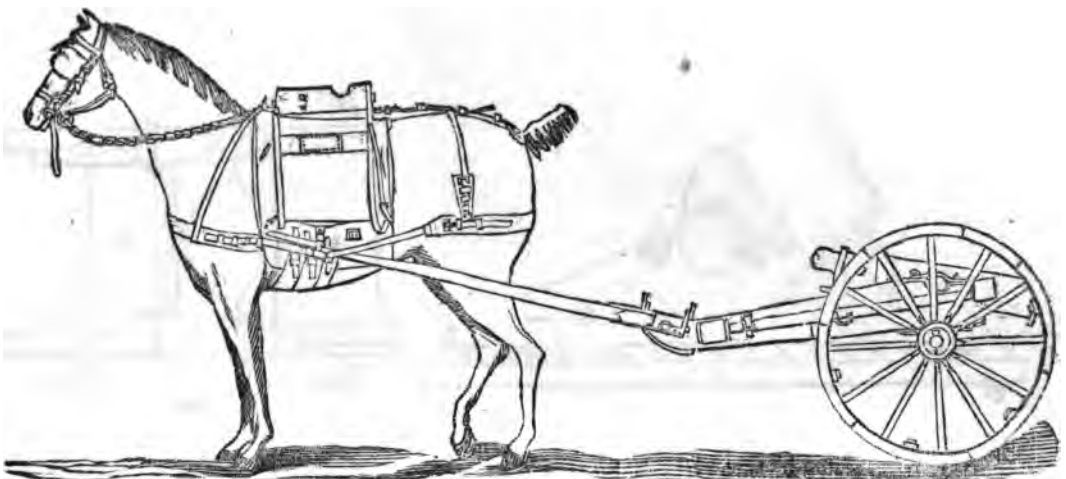

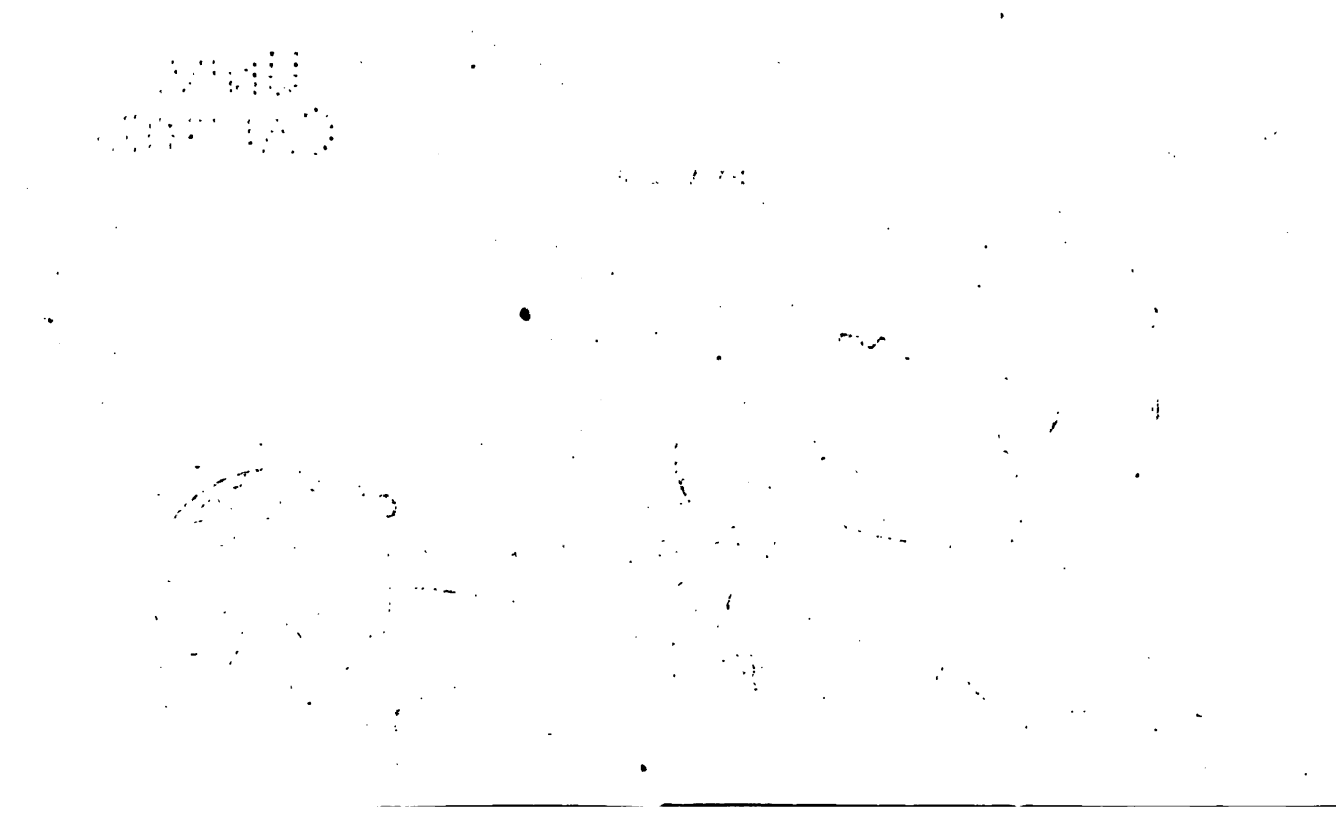

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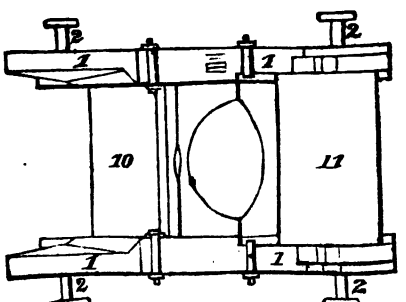

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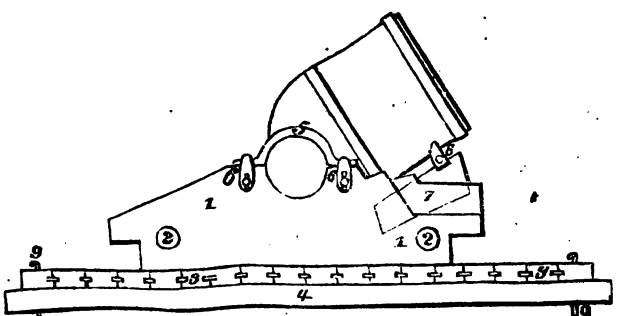

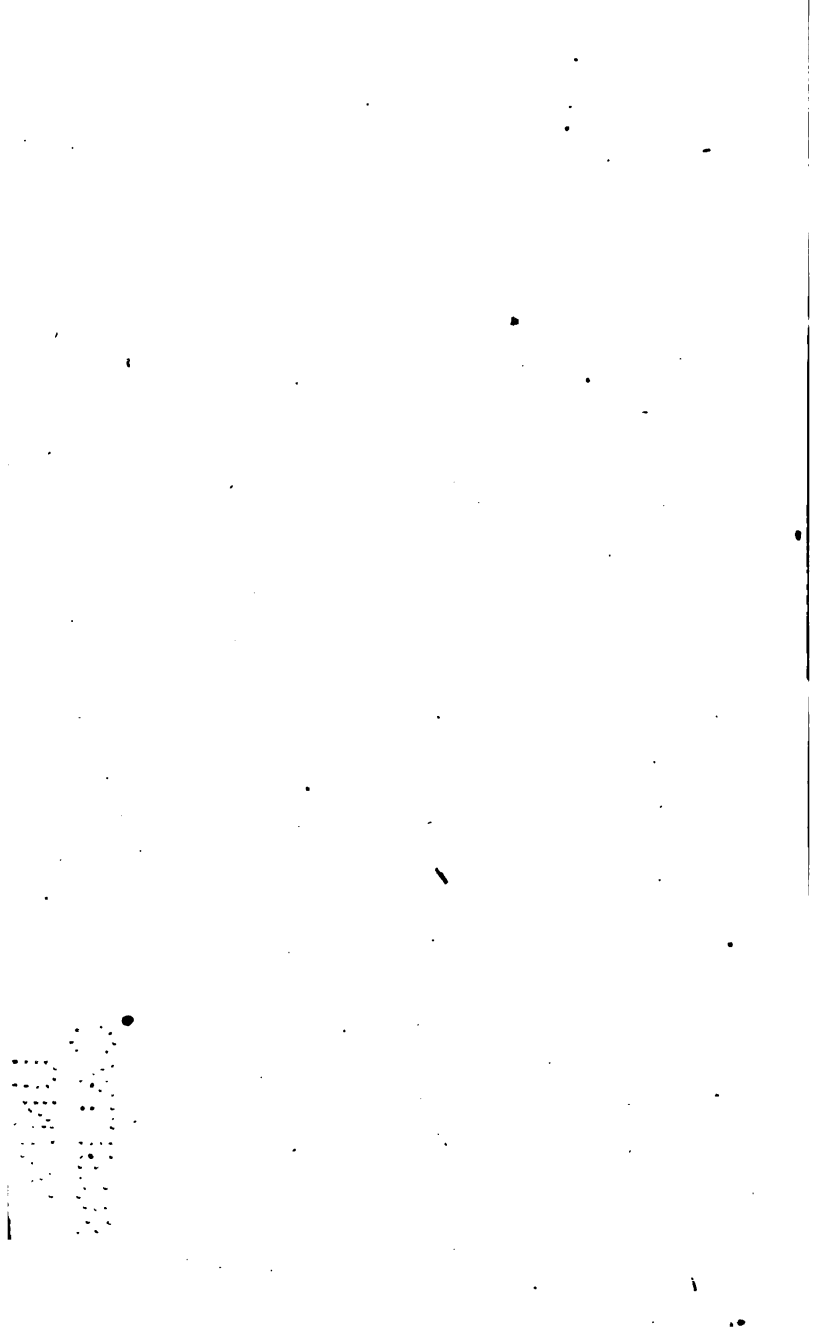

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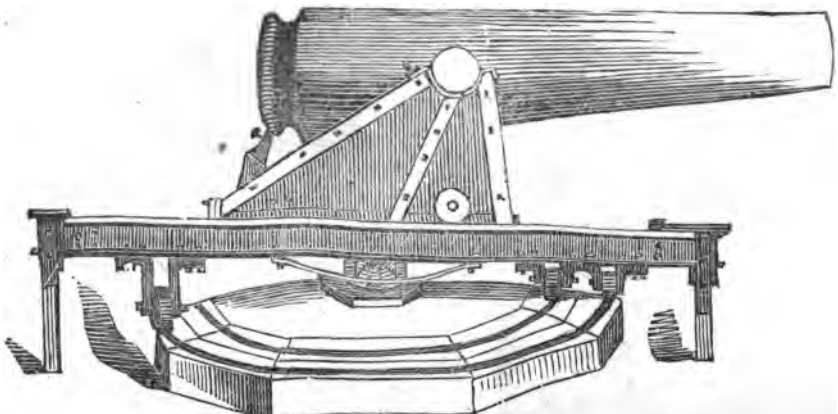

PLATE 6.

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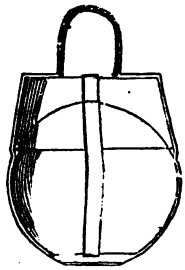

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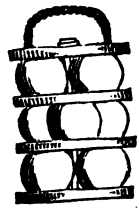

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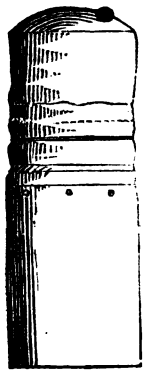

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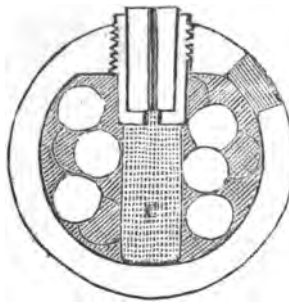

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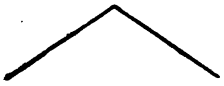

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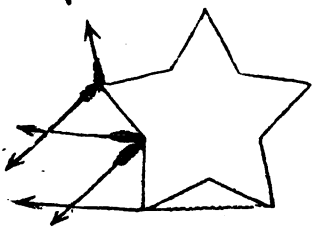

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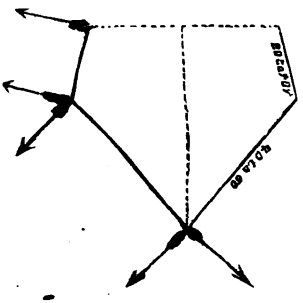

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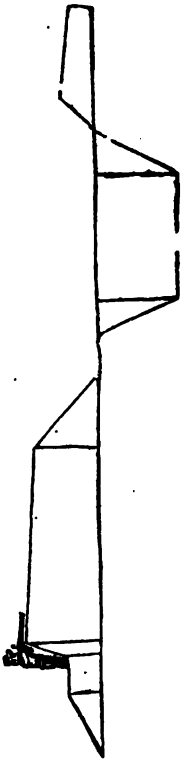

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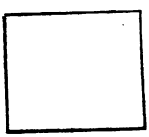
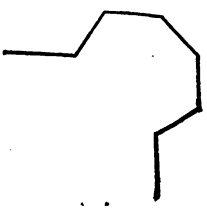




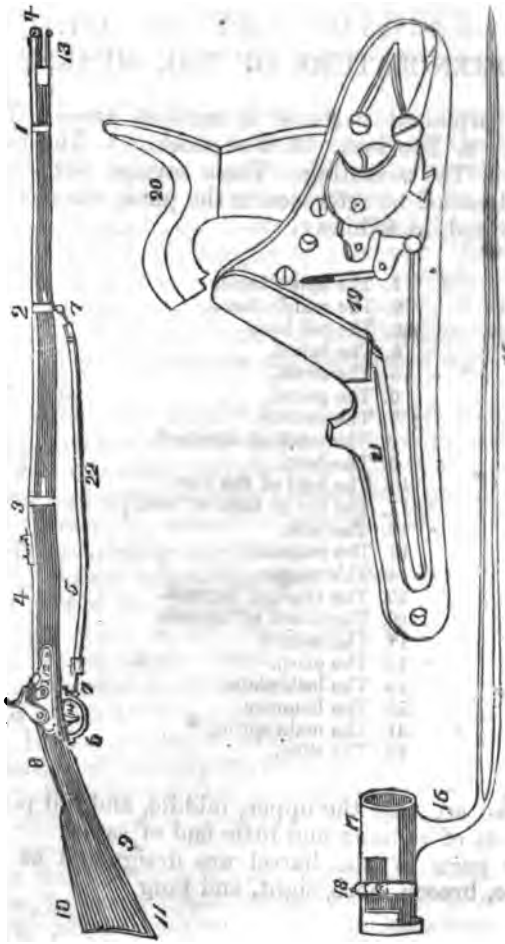


Plate 8.

NOMENCLATURE OF THE MUSKET.

The principal parts of a musket are—1. The barrel. 2. The lock. 3. The stock. 4. The rammer. 5. The mounting. These several parts will be understood by reference to the plate, where they are marked, as follows:

1. The upper band.
2. The middle band.
3. The tail band.
4. The barrel.
5. The swell.
6. The guard.
7. The swivels.
8. The small of the stock.
9. The butt.
10. The heel of the butt.
11. The toe or beak of butt.
12. The lock.
13. The rammer.
14. The trigger.
15. The blade of bayonet.
16. The shank of bayonet.
17. The socket.
18. The clasp.
19. The lock-plate.
20. The hammer.
21. The main spring.
22. The sling.

There are also the upper, middle, and tail pipe; and butt of rammer and little end of same.

The parts of the barrel are designated as the muzzle, breech, bore, sight, and tang.

SCHOOL OF THE SOLDIER.

THE object of this school being the individual and progressive instruction of the recruits, the instructor never requires a movement to be executed until he has given an exact explanation of it; and he executes, himself, the movement which he commands, so as to join example to precept. He accustoms the recruit to take, by himself, the position which is explained—teaches him to rectify it only when required by his want of intelligence—and sees that all the movements are performed without precipitation.

Each movement should be understood before passing to another. After they have been properly executed in the order laid down in each lesson, the instructor no longer confines himself to that order; on the contrary, he should change it, that he may judge of the intelligence of the men.

The instructor allows the men to rest at the end of each part of the lesson, or oftener, if he thinks proper, especially at the commencement; for this purpose he commands—REST.

At the command—REST, the soldier is no longer required to preserve immobility, or to remain in his place. If the instructor wishes merely to relieve the attention of the recruit, he commands, *in place* —REST; the soldier is then not required to preserve his immobility, but he always keeps one of his feet in its place.

When the instructor wishes to commence the instruction, he commands—ATTENTION; at this command the soldier takes his position, remains motionless, and fixes his attention.

The *School of the Soldier* will be divided into three parts: the first, comprehending what ought to be taught to recruits without arms; the second, the manual of arms, the loadings, and firings; the third, the principles of alignment, the march by the front, the different steps, the march by the flank, the principles of wheeling, and those of change of direction; also, long marches in double quick time and the run.

Each part will be divided into lessons for convenience of instruction.

COMMANDS.

There are three kinds.

The command of *caution*, which is *attention*.

The *preparatory command*, which indicates the movement which is to be executed.

The command of *execution*, such as *march* or *halt*, or, in the manual of arms, the part of command which causes an execution.

The tone of command should be animated, distinct, and of a loudness proportioned to the number of men under instruction.

The command—*attention*, is pronounced at the top of the voice, dwelling on the last syllable.

The command of *execution* will be pronounced in a tone firm and brief.

Commands of caution and the preparatory commands are herein distinguished by *italics*, those of execution by CAPITALS.

Those preparatory commands which, from their length, are difficult to be pronounced at once, must be divided into two or three parts, with an ascending progression in the tone of command, but always in such a manner that the tone of execution may be more energetic and elevated; the divisions

are indicated by a hyphen. The parts of command which are placed in a parenthesis are not pronounced.

PART FIRST.

This will be taught, if practicable, to one recruit at a time; but three or four may be united, when the number be great, compared with that of the instructors. In this case the recruits will be placed in a single rank at one pace from each other. In this part the recruits will be without arms.

LESSON I.

POSITION OF THE SOLDIER.—(PLATES 9 AND 10.)

Heels on the same line, as near each other as the conformation of the man will permit.

The feet turned out equally, and forming with each other something less than a right angle.

The knees straight without stiffness.

The body erect on the hips, inclining a little forward.

The shoulders square and falling equally.

The arms hanging naturally.

The elbows near the body.

The palm of the hand turned a little to the front, the little finger behind the seam of the pantaloons.

The head erect and square to the front, without constraint.

The chin near the stock, without covering it.

Plate 9.

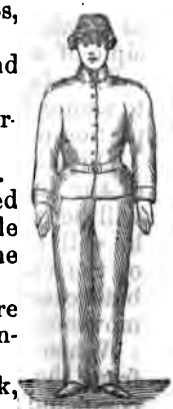


Plate 10.

The eyes fixed straight to the front, and striking the ground about the distance of fifteen paces.

The instructor having given the recruit the position of the soldier without arms, will now teach him the turning of the head and eyes. He will command:

1. *Eyes*—RIGHT. 2. FRONT.

At the word *right*, the recruit will turn the head gently, so as to bring the inner corner of the left eye in a line with the buttons of the coat, the eyes fixed on the line of the eyes of the men in, or supposed to be in, the same rank.

At the second command, the head will resume the direct or habitual position.

The movement of *Eyes*—LEFT will be executed by inverse means.

The instructor will take particular care that the movement of the head does not derange the squareness of the shoulders, which will happen if the movement of the former be too sudden.

In advanced stages of drill this command is given as *Right* (or *left*) *Dress*, and is the governing principle of all alignments.

The object of turning the head, is for the recruit to assure himself that he is in line, when forming a portion of a line composed of six or more.

On executing the order, if he have but a glimpse of the left cheek of the second man from him, he will be in line; if he see too much of the side-face, he will be too far to the front; and if no portion of the cheek be seen, he is too far to the rear; in both cases the correction must be made by gradual movement.

When the instructor shall wish the recruit to pass from the state of attention to that of ease, he will command:

REST.

To cause a resumption of the habitual position, the instructor will command:

1. *Attention.* 2. SQUAD.

At the first word, the recruit will fix his attention; at the second, he will resume the prescribed position and steadiness.

LESSON II.

FACINGS.

Facing to the right and left will be executed in one *time*, or pause. The instructor will command:

1. *Squad.* 2. *Right* (or *left*)—FACE.

At the second command, raise the right foot slightly, turn on the left heel, raising the toes a little, and then replace the right heel by the side of the left, and on the same line.

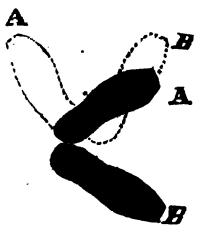


Plate 11.

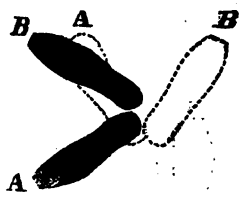


Plate 12.

Plate 11 shows this movement, the dotted lines being the original position of the feet. Plate 12 shows the position of the feet when facing to the left.

The full face to the rear (or front) will be executed in two *times*, or pauses. The instructor will command:

1. *Squad.* 2. About—Face.

At the word *about*, the recruit will turn on the left heel, bring the left toe to the front, carry the right foot to the rear, the hollow opposite to, and full three inches from, the left heel, the feet square to each other.

At the command "*Face*," the soldier, raising the points of the feet, or toes, and keeping the hams straight, will turn on both heels, and face to the rear, carrying back at the same time the right heel to the side of the left.

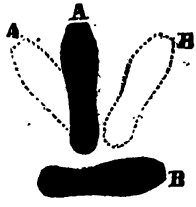


Plate 13.

Plate 14.

Plate 15.

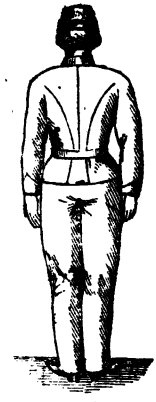


Plate 16.

The first movement is shown by diagram plates, 13 and 14, the dotted lines showing the original positions of the feet. Plates 15 and 16 show the completion of the movement.

In facing about, it will be observable that solidity of movement is very necessary. A wavering of the piece or throwing the body off the equilibrium tends to disarrange the entire movement.

When the cartridge-box is secured to the waist-belt, the right hand will not be moved.

LESSON III.

PRINCIPLES OF THE DIRECT STEP.

The length of the direct step or pace, in common time, will be twenty-eight inches, reckoning from heel to heel, and in swiftness, at the rate of ninety in a minute.

The instructor, seeing the recruit confirmed in his position, will explain to him the principle and mechanism of this step, placing himself six or seven paces from, and facing to, the recruit. He will himself execute slowly the step, in the way of illustration, and then command:

1. *Squad—forward.* 2. *Common time.* 3. MARCH.

At the first command, the recruit will throw the weight of the body on the right leg, without bending the left knee.

At the third command, he will smartly, but without a jerk, carry straight forward the left foot twenty-eight inches from the right, the sole near the ground, the ham extended, the toe a little depressed,

and, as also the knee, slightly turned out; he will, at the same time, throw the weight of the body forward, and plant flat the left foot, without shock, precisely at the distance where it finds itself from the right, when the weight of the body is brought forward, the whole of which will now rest on the advanced foot. The recruit will next, in like manner, advance the right foot and plant it as above, the heel twenty-eight inches from the heel of the left foot, and thus continue to march without crossing the legs, or striking the one against the other, without turning the shoulders, and preserving always the face direct to the front.

When the instructor shall wish to arrest the march, he will command:

1. *Squad.* 2. HALT.

At the second command, which will be given at the instant when either foot is coming to the ground, the foot in the rear will be brought up, and planted by the side of the other, without shock.

The instructor will indicate, from time to time, to the recruit, the cadence of the step by giving the command *one* at the instant of raising a foot, and *two* at the instant it ought to be planted, observing the cadence of ninety steps in a minute. This method will contribute greatly to impress upon the mind the two motions into which the step is naturally divided.

It is important that the instructor assure himself that the principles of the step are well observed, in order to correct promptly all mistakes; for this purpose he will frequently throw himself ten or twelve paces to the front, when, if he do not see the sole of the shoe while the recruit is raising, advancing, and planting his foot, nor observe any wavering of

the shoulders, he may be sure the movement is properly performed.

Common time will be employed only in the first and second parts of the School of the Soldier. As soon as the recruit has acquired steadiness, has become established in the principles of shouldered arms; and in the mechanism, length, and swiftness of the step in common time, he will be practiced only in quick time, the double quick time, and the run.

The principles of the step in quick time are the same as for common time, but its swiftness is at the rate of one hundred and ten steps per minute.

The instructor wishing the squad to march in quick time, will command:

1. *Squad—forward.* 2. MARCH.

LESSON IV.

PRINCIPLE OF THE DOUBLE QUICK STEP.

The length of the double quick step is thirty-three inches, and its swiftness at the rate of one hundred and sixty-five steps per minute.

The instructor wishing to teach the recruits the principles and mechanism of the double quick step, will command:

1. *Double quick step.* 2. MARCH.

At the first command, the recruit will raise his hands to a level with his hips, the hands closed, the nails toward the body, the elbows to the rear.

At the second command, he will raise to the front his left leg bent, in order to give to the knee the greatest elevation, the part of the leg between the knee and the instep vertical, the toe depressed; he

will then replace his foot in its former position; with the right leg he will execute what has just been prescribed for the left, and the alternate movement of the legs will be continued until the command:

1 *Squad.* 2. HALT.

At the second command, the recruit will bring the foot which is raised by the side of the other, and, dropping at the same time his hands by his side, will resume the position of the soldier without arms.

The instructor, placing himself seven or eight paces from, and facing the recruit, will indicate the cadence by the commands *one* and *two*, given alternately at the instant each foot should be brought to the ground, which, at first, will be in common time, but its rapidity will be gradually augmented.

The recruit being sufficiently established in the principles of this step, the instructor will command:

1. *Squad—forward.* 2. *Double quick.* 3. MARCH.

At the first command, the recruit will throw the weight of his body on the right leg.

At the second command, he will place his arms bent on a level with his hips.

At the third command, he will carry forward the left foot, the leg slightly bent, the knee somewhat raised—will plant his left foot, the toe first, thirty-three inches from the right, and with the right foot will then execute what has just been prescribed for the left. This alternate movement of the legs will take place by throwing the weight of the body on the foot that is planted, and by allowing a natural, oscillatory motion to the arms.

The double quick step may be executed with different degrees of swiftness. Under urgent circumstances, the cadence of this step may be increased to one hundred and eighty per minute. At this rate, a distance of four thousand yards would be passed over in about twenty-five minutes.

The recruits will be exercised also in running.

The principles are the same as for the double quick step, the only difference consisting in a greater degree of swiftness.

It is recommended, in marching at double quick time, or the run, that the men should breathe as much as possible through the nose, keeping the mouth closed. Experience has proved that, by conforming to this principle, a man can pass over a much longer distance, and with less fatigue.

PART SECOND.

GENERAL RULES.

The instructor will not pass the men to this second part until they shall be well established in the position of the body, and in the manner of marching at the different steps.

He will then unite four men, whom he will place in the same rank, elbow to elbow, and instruct them in the position of shouldered arms, as follows:

LESSON I.

PRINCIPLES OF SHOULDERED ARMS.

The recruit being placed as explained in the first lesson of the first part, the instructor will cause him to bend the right arm slightly, and place the piece in it, in the following manner—plate 17:

The piece in the right hand—the barrel nearly

Plate 17.

vertical and resting in the hollow of the shoulder—the guard to the front, the arm hanging nearly at its full length near the body; the thumb and fore-finger embracing the guard, the remaining fingers closed together, and grasping the swell of the stock just under the cock, which rests on the little finger.

Recruits are frequently seen with natural defects in the conformation of the shoulders, breast and hips. These the instructor will labor to correct in the lessons without arms, and afterwards, by steady endeavors, so that the appearance of the pieces, in the same line, may be uniform, and this without constraint to the men in their positions.

The instructor will have occasion to remark that recruits, on first bearing arms, are liable to derange their position by lowering the right shoulder and the right hand, or by sinking the hip and spreading out the elbows.

He will be careful to correct all these faults by continually rectifying the position; he will sometimes take away the piece to replace it the better, he will avoid fatiguing the recruits too much in the beginning, but labor by degrees to render this position so natural and easy that they may remain in it a long time without fatigue.

Finally, the instructor will take great care that the piece, at a shoulder, be not carried too high nor too low; if too high, the right elbow would spread out, the soldier would occupy too much space in his rank, and the piece be made to waver; if too

low, the files would be too much closed, the soldier would not have the necessary space to handle his piece with facility, the right arm would become too much fatigued, and would draw down the shoulder.

The instructor, before passing to the second lesson, will cause to be repeated the movements of *eyes right*, *left* and *front*, and the *facings*.

LESSON II.

MANUAL OF ARMS.

The manual of arms will be taught to four men, placed, at first, in one rank, elbow to elbow, and afterwards in two ranks.

Each command will be executed in one *time* (or pause), but this time will be divided into motions. the better to make known the mechanism.

The rate (or swiftness) of each motion, in the manual of arms, with the exceptions herein indicated, is fixed at the ninetieth part of a minute; but, in order not to fatigue the attention, the instructor will, at first, look more particularly to the execution of the motions, without requiring a nice observance of the cadence, to which he will bring the recruits progressively, and after they shall have become a little familiarized with the handling of the piece.

As the motions relative to the cartridge, to the rammer, and to the fixing and unfixing of the bayonet, cannot be executed at the rate prescribed, nor even with a uniform swiftness, they will not be subjected to that cadence. The instructor will, however, labor to cause these motions to be executed with promptness, and, above all, with regularity.

The last syllable of the command will decide the brisk execution of the first motion of each time (or

pause). The commands, *two*, *three*, and *four*, will decide the brisk execution of the other motions. As soon as the recruits shall well comprehend the positions of the several motions of a time, they will be taught to execute the time without resting on its different motions; the mechanism of the time will, nevertheless, be observed, as well to give a perfect use of the piece, as to avoid the sinking of, or slurring over, either of the motions.

The manual of arms will be taught in the following progression; the instructor will command:

Support—ARMS (Plate 18.)

One time and three motions.

Plate 18.

First motion.—Bring the piece, with the right hand, perpendicularly to the front and between the eyes, the barrel to the rear; seize the piece with the left hand at the lower band, raise this hand as high as the chin, and seize the piece at the same time with the right hand four inches below the cock.

Second motion.—Turn the piece with the right hand, the barrel to the front; carry the piece to the left shoulder, and pass the fore-arm extended on the breast between the right hand and the cock; support the cock against the left fore-arm, the left hand resting on the right breast.

Third motion.—Drop the right hand by the side.

When the instructor may wish to give repose in this position, he will command:

REST.

At this command, the recruits will bring up smartly the right hand to the handle of the piece (small of the stock), when they will not be required to preserve silence, or steadiness of position.

When the instructor may wish the recruits to pass from this position to that of silence and steadiness, he will command:

Attention—SQUAD.

At the second word, the recruits will resume the position of the third motion of *support arms.*

Shoulder—ARMS—(Plate 17.)

One time and three motions.

First motion.—Grasp the piece with the right hand under and against the left fore-arm; seize it with the left hand at the lower band, the thumb extended; detach the piece slightly from the shoulder, the left fore-arm along the stock.

Second motion.—Carry the piece vertically to the right shoulder with both hands, the rammer to the front, change the position of the right hand so as to embrace the guard with the thumb and fore-finger, slip the left hand to the height of the shoulder, the fingers extended and joined, the right arm nearly straight.

Third motion.—Drop the left hand quickly by the side.

Present—ARMS—(Plate 19.)

One time and two motions.

First motion.—With the right hand bring the piece erect before the centre of the body, the rammer to the front; at the same time seize the piece

Plate 19.

with the left hand half-way between the guide sight and lower band, the thumb extended along the barrel and against the stock, the fore-arm horizontal and resting against the body, the hand as high as the elbow.

Second motion.—Grasp the small of the stock with the right hand, below and against the guard.

Shoulder—ARMS.

One time and two motions.

First motion.—Bring the piece to the right shoulder, at the same time change the position of the right hand so as to embrace the guard with the thumb and fore-finger, slip up the left hand to the height of the shoulder, the fingers extended and joined, the right arm nearly straight.

Second motion.—Drop the left hand quickly by the side.

Order—ARMS.

One time and two motions.

First motion.—Seize the piece briskly with the left hand near the upper band, and detach it slightly from the shoulder with the right hand; loosen the grasp of the right hand, lower the piece with the left, re-seize the piece with the right hand above the lower band, the little finger in the rear of the barrel, the butt about four inches from the ground, the right hand supported against the hip, drop the left hand by the side. If the rifle musket is used, the piece will be seized by the left hand a little

above the middle band, and it will be seized by the right hand, just above the lower band.

Second motion.—Let the piece slip through the right hand to the ground by opening slightly the fingers, and take the position about to be described.

POSITION OF ORDER ARMS—(Plate 20.)

Plate 20.

The hand low, the barrel between the thumb and fore-finger extended along the stock; the other fingers extended and joined; the muzzle about two inches from the right shoulder; the rammer in front; the toe (or beak) of the butt against, and in a line with, the toe of the right foot, the barrel perpendicular.

When the instructor may wish to give repose in this position, he will command:

REST.

At this command, the recruits will not be required to preserve silence or steadiness.

When the instructor may wish the recruits to pass from this position to that of silence and steadiness, he will command:

1. *Attention.* 2. SQUAD.

At the second word, the recruits wil resume the position of *order arms.*

Shoulder—ARMS.

One time and two motions.

First motion.—Raise the piece vertically with the

right hand to the height of the right breast, and opposite the shoulder, the elbow close to the body: seize the piece with the left hand below the right, and drop quickly the right hand to grasp the piece at the swell of the stock, the thumb and fore-finger embracing the guard; press the piece against the shoulder with the left hand, the right arm nearly straight.

Second motion.—Drop the left hand quickly by the side.

LOAD IN NINE TIMES.

1. LOAD.

One time and one motion.

Plate 21.

Grasp the piece with the left hand as high as the right elbow, and bring it vertically opposite the middle of the body, shift the right hand to the upper band, place the butt between the feet, the barrel to the front; seize it with the left hand near the muzzle, which should be three inches from the body; carry the right hand to the cartridge-box. If the rifle musket is used, the right hand will be shifted to just below the upper band. The muzzle will be eight inches from the body.—Plate 21

2. *Handle*—CARTRIDGE.

One time and one motion.

Seize the cartridge with the thumb and next two fingers, and place it between the teeth.

3. *Tear*—CARTRIDGE.

One time and one motion.

Tear the paper to the powder, hold the cartridge upright between the thumb and first two fingers, near the top; in this position place it in front of and near the muzzle, the back of the hand to the front.

4. *Charge*—CARTRIDGE.

One time and one motion.

Empty the powder into the barrel; disengage the ball from the paper with the right hand and the thumb and first two fingers of the left; insert it into the bore, the pointed end uppermost, and press it down with the right thumb; seize the head of the rammer with the thumb and fore-finger of the right hand, the other fingers closed, the elbows near the body.—Plate 22.

Plate 22.

5. *Draw*—RAMMER.

One time and three motions.

First motion.—Half draw the rammer, by extending the right arm. Plate 23. steady it in this position with the left thumb; grasp the rammer near the muzzle with the right hand, the little finger uppermost, the nails to the front, the thumb extended along the rammer.

Second motion.—Clear the rammer from the pipes by again extending the arm; the rammer in the prolongation of the pipes.—Plate 24.

Plate 23.

Plate 24.

Third motion.—Turn the rammer, the little end of the rammer passing near the left shoulder; place the head of the rammer on the ball, the back of the hand to the front.

6. *Ram*—CARTRIDGE.

One time and one motion.

Insert the rammer as far as the right, and steady it in this position with the thumb of the left hand; seize the rammer at the small end with the thumb and fore-finger of the right hand, the back of the hand to the front; press the ball home, the elbows near the body.—Plate 25.

Plate 25.

7. *Return*—RAMMER.

One time and three motions.

First motion.—Draw the rammer half way out, and steady it in this position with the left thumb; grasp it near the muzzle with the right hand, the little finger uppermost, the nails to the front, the thumb along the rammer; clear the rammer from the bore by extending the arm, the nails to the front, the rammer in the prolongation of the bore.

Second motion.—Turn the rammer, the head of the rammer passing near the left shoulder, and insert it in the pipes until the right hand reaches the muzzle, the nails to the front.

Third motion.—Force the rammer home by placing the little finger of the right hand on the head of the rammer; pass the left hand down the barrel to the extent of the arm, without depressing the shoulder.

8. PRIME.

One time and two motions.

Plate 26.

First motion.—With the left hand raise the piece till the hand is as high as the eye, grasp the small of the stock with the right hand; half face to the right; place, at the same time, the right foot behind and at right angles with the left; the hollow of the right foot against the left heel. Slip the left hand down to the lower band, the thumb along the stock, the left elbow against the body; bring the piece to the right side, the butt below the right fore-arm—the small of the stock against the body and two inches below the right breast, the barrel upwards, the muzzle on a level with the eye.—Plate 26.

Second motion.—Half cock with the thumb of the right hand, the fingers supported against the guard and the small of the stock—remove the old cap with one of the fingers of the right hand, and with the thumb and fore-finger of the same hand, take a cap from the pouch, place it on the nipple, and press it down with the thumb; seize the small of the stock with the right hand.

9. *Shoulder*—ARMS.

One time and two motions.

First motion.—Bring the piece to the right

shoulder and support it there with the left hand, face to the front; bring the right heel to the side of, and on a line with the left; grasp the piece with the right hand, as indicated in the position of *shoulder arms.*

Second motion.—Drop the left hand quickly by the side.

READY.

One time and three motions

First motion.—Raise the piece slightly with the right hand, making a half face to the right on the left heel; carry the right foot to the rear, and place it at right angles to the left, the hollow of it opposite to and against the left heel; grasp the piece with the left hand at the lower band and detach it slightly from the shoulder.

Second Motion.—Bring down the piece with both hands, the barrel upward, the left thumb extended along the stock, the butt below the right fore-arm, the small of the stock against the body and two inches below the right breast, the muzzle as high as the eye, the left elbow against the side; place at the same time the right thumb on the head of the cock, the other fingers under and against the guard.

Third Motion.—Cock, and seize the piece at the small of the stock, without deranging the position of the butt.

Aim.

One time and one motion.

Plate 27.

Raise the piece with both hands, and support the butt against the right shoulder; the left elbow down, the right as high as the shoulder; incline the head upon the butt, so that the right eye may perceive quickly the notch of the hausse, the front sight, and the object aimed at; the left eye closed, the right thumb extended along the stock, the forefinger on the trigger.

When recruits are formed into two ranks to execute the firings, the front rank men will raise a little less the right elbow, in order to facilitate the aim of the rear rank men.

The rear rank men, in aiming, will each carry the right foot about eight inches to the right, and towards the left heel of the man next on the right, inclining the upper part of the body forward.

Fire.

One time and one motion.

Press the fore-finger against the trigger, fire, without lowering or turning the head, and remain in this position.

Instructors will be careful to observe when the men fire, that they aim at some distinct object, and

that the barrel be so directed that the line of fire and the line of sight be in the same vertical plane. They will often cause the firing to be executed on ground of different inclinations, in order to accustom the men to fire at objects either above or below them.

LOAD.

One time and one motion.

Bring down the piece with both hands, at the same time face to the front and take the position of *load* as indicated, (plate 21). Each rear rank man will bring his right foot by the side of the left.

The men being in this position, the instructor will cause the loading to be continued by the commands and means prescribed in the first motion of load.

If, after firing, the instructor should not wish the recruits to reload, he will command:

Shoulder—ARMS.

One time and one motion.

Throw up the piece briskly with the left hand and resume the position of *shoulder arms*, at the same time face to the front, turning on the left heel, and bring the right heel on a line with the left.

To accustom the recruits to wait for the command *fire*, the instructor, when they are in the position of *aim*, will command:

Recover—ARMS.

One time and one motion

At the first part of the command, withdraw the finger from the trigger; at the command *arms*, retake the position of the third motion of *ready*.

The recruits being in the position of the third motion of *ready*, if the instructor should wish to bring them to a shoulder, he will command:

Shoulder—ARMS.

One time and one motion.

At the command *shoulder*, place the thumb upon the cock, the fore-finger on the trigger, half cock, and seize the small of the stock with the right hand. At the command *arms*, bring up the piece briskly to the right shoulder, and retake the position of shoulder arms.

REMARKS ON LOADING AND FIRING.

Whenever the loadings and firings are to be executed, and the cartridge-boxes are slung upon the waist-belt, the instructor will cause them to be brought to the front.

If Maynard's primer be used, the command will be—

Load in eight times.

And the eighth command will be *shoulder arms*, and executed from *return rammer* in one time and two motions, as follows:

First Motion.—Raise the piece with the left hand, and take the position of shoulder arms.

Second Motion.—Drop the left hand quickly by the side.

The recruits being at shoulder arms when the instructor shall wish to fix bayonets, he will command:

Fix—BAYONET.

One time and three motions.

First Motion.—Grasp the piece with the left hand at the height of the shoulder, and detach it slightly from the shoulder with the right hand.

Second Motion.—Quit the piece with the right hand, lower it with the left hand, opposite the middle of the body, and place the butt between the feet without shock; the rammer to the rear, the barrel vertical, the muzzle three inches from the body; seize it with the right hand at the upper band, and carry the left hand reversed to the handle of the bayonet. If the rifle musket be used the barrel will be inclined forward, the muzzle eight inches from the body, and the left hand reversed to the handle of the bayonet.—Plate 28.

Plate 28.

Third Motion.—Draw the bayonet from the scabbard and fix it on the extremity of the barrel; seize the piece with the left hand, the arm extended, the right hand at the upper band. If the rifle musket be used, the clasp will be turned as soon as the bayonet is fixed upon the barrel.

Shoulder ARMS.

One time and two motions.

First Motion.—Raise the piece with the left hand and place it against the right shoulder, the rammer to the front; seize the piece at the same time with the right hand at

the swell of the stock, the thumb and fore-finger embracing the guard, the right arm nearly extended.

Second Motion.—Drop briskly the left hand by the side.

Charge—BAYONET.

One time and two motions.

First Motion.—Raise the piece slightly with the right hand, and make a half face to the right on the left heel; place the hollow of the right foot opposite to and three inches from the left heel, the feet square; seize the piece at the same time with the left hand a little above the lower band.

Plate 29.

Second Motion.—Bring down the piece with both hands, the barrel uppermost, the left elbow against the body; seize the small of the stock, at the same time, with the right hand, which will be supported against the hip; the point of the bayonet as high as the eye.—Plate 29.

Shoulder—ARMS.

One time and two motions.

First Motion.—Throw up the piece briskly with the left hand in facing to the front, place it against the right shoulder, the rammer to the front;

turn the right hand so as to embrace the guard, slide the left hand to the height of the shoulder, the right hand nearly extended.

Second Motion.—Drop the left hand smartly by the side.

Trail—ARMS.

One time and two motions.

Plate 30.

First Motion.—The same as the first motion of *order arms.*

Second Motion.—Incline the muzzle slightly to the front, the butt to the rear and about four inches from the ground. The right hand supported at the hip, will so hold the piece that the rear rank men may not touch with their bayonets the men in the front rank.—(Plate 30.)

Shoulder—ARMS.

At the command *shoulder*, raise the piece perpendicularly in the right hand, the little finger in the rear of the barrel; at the command *arms*, execute what has been prescribed for the *shoulder* from the position of *order arms.*

Unfix—BAYONET.

One time and three motions.

First and second Motions.—The same as the first and second motions of *fix bayonet*, except that, at the end of the second command, the thumb of the right hand will be placed on the spring of the sabre-bayonet, and the left hand will embrace the handle

of the sabre-bayonet and the barrel, the thumb extended along the blade. If the rifle musket is used, at the end of the second command turn the clasp of the bayonet by pressing against it the thumb of the left hand, and then grasp the socket of the bayonet with the left hand, the shank resting between the thumb and forefinger, the thumb pointed up.

Third Motion.—Press the thumb of the right hand on the spring, wrest off the sabre-bayonet, turn it to the right, the edge to the front, lower the guard until it touches the right hand, which will seize the back and the edge of the blade between the thumb and first two fingers, the other fingers holding the piece; change the position of the hand without quitting the handle, return the sabre-bayonet to the scabbard, and seize the piece with the left hand, the arm extended. If the rifle musket is used, the following will be the method, viz.:

Third Motion.—Wrest off the bayonet, turn it to the right, bringing the point of the bayonet down; change the position of the hand without quitting hold of the shank of the socket, return the bayonet to the scabbard, and seize the piece with the left hand, the arm extended.

Shoulder—ARMS.

One time and two motions.

First Motion.—The same as the first motion from *fix bayonet.*

Second Motion—The same as the second motion from *fix bayonet.*

Secure—ARMS.

One time and three motions.

First Motion.—The same as the first motion of

support, arms, except with the right hand seize the piece at the small of the stock.

Second Motion.—Turn the piece with both hands, the barrel to the front; bring it opposite the left shoulder, the butt against the hip, the left hand at the lower band, the thumb as high as the chin and extended on the rammer; the piece erect and detached from the shoulder, the left fore-arm against the piece.

Plate 31.

Third Motion.—Reverse the piece, pass it under the left arm, the left hand remaining at the lower band, the thumb on the rammer to prevent it from sliding out, the little finger resting against the hip, the right hand falling at the same time by the side.—Plate 31.

Shoulder—ARMS.

One time and three motions.

First Motion.—Raise the piece with the left hand, and seize it with the right hand at the small of the stock. The piece erect and detached from the shoulder, the butt against the hip, the left fore-arm along the piece.

Second Motion.—The same as the second motion of *shoulder arms from a support.*

Third Motion.—The same as the third motion of *shoulder arms from a support.*

Right shoulder shift.—Arms.

One time and two motions.

First Motion.—Detach the piece perpendicularly from the shoulder with the right hand, and seize it with the left between the lower band and guide-sight, raise the piece, the left hand at the height of the shoulder and four inches from it; place, at the same time, the right hand on the butt, the beak between the first two fingers, the other two fingers under the butt plate.

Second Motion.—Quit the piece with the left hand, raise and place the piece on the right shoulder with the right hand, the lock plate upward; let fall at the same time the left hand by the side.

Shoulder—ARMS.

One time and two motions.

First Motion.—Raise the piece perpendicularly by extending the right arm to its full length, the rammer to the front; at the same time seize the piece with the left hand between the lower band and guide sight.

Second Motion.—Quit the butt with the right hand, which will immediately embrace the guard, lower the piece to the position of shoulder arms, slide up the left hand to the height of the shoulder, the fingers extended and closed. Drop the left hand by the side.

The men being at support arms, the instructor will sometimes raise pieces to be brought to the right shoulder. To this effect he will command:

Right shoulder shift—ARMS.

One time and two motions.

Plate 32.

First Motion.—Seize the piece with the right hand, below and near the left fore-arm, place the left hand under the butt, the heel of the butt between the first two fingers.

Second Motion.—Turn the piece with the left hand, the lock plate upward, carry it to the right shoulder, the left hand still holding the butt, the muzzle elevated; hold the piece in this position and place the right hand upon the butt, as is prescribed, and let fall the left hand by the side.—Plate 32.

Support—ARMS.

One time and two motions.

First Motion.—The same as the first motion of *shoulder arms*.

Second Motion.—Turn the piece with both hands, the barrel to the front, carry it opposite the left shoulder, slip the right hand to the small of the stock, place the left fore-arm extended on the breast, as is prescribed, and let fall the right hand by the side.

Arms—AT WILL.

One time and one motion.

At this command, carry the piece at pleasure on either shoulder, with one or both hands, the muzzle elevated.

Shoulder—ARMS.

One time and one motion.

At this command, retake quickly the position of shoulder arms.

The recruits being at ordered arms, when the instructor shall wish to cause the pieces to be placed on the ground, he will command:

Ground—ARMS.

One time and two motions.

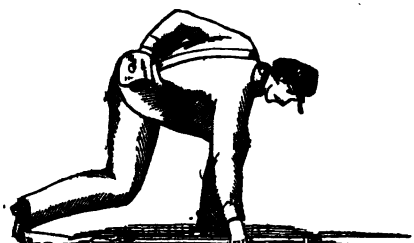


Plate 33.

First Motion.—Turn the piece with the right hand, the barrel to the left, at the same time seize the cartridge box with the left hand, bend the body, advance the left foot, the heel opposite the lower band; lay the piece on the ground with the right hand, the toe of the butt on a line with the right toe, the knees slightly bent, the right heel raised.—Plate 33.

Second Motion.—Rise up, bring the left foot by the side of the right, quit the cartridge box with the left hand, and drop the hands by the side.

Raise—ARMS.

One time and two motions.

First Motion.—Seize the cartridge box with the left hand, bend the body, advance the left foot opposite the lower band, and seize the piece with the right hand.

Second Motion.—Raise the piece, bringing the left foot by the side of the right; turn the piece with the right hand, the rammer to the front; at the same time quit the cartridge box with the left hand, and drop this hand by the side.

INSPECTION OF ARMS.

The recruits being at *ordered arms*, and having the bayonet in the scabbard, if the instructor wishes to cause an inspection of arms, he will command:

Inspection—ARMS.

One time and two motions.

First Motion.—Seize the piece with the left hand below and near the upper band, carry it with both hands opposite the middle of the body, the butt between the feet, the rammer to the rear, the barrel vertical, the muzzle about three inches from *the* body; (should the rifle musket be used, the muzzle will be about eight inches from the body); carry the left hand reversed to the bayonet, draw it from the scabbard and fix it on the barrel; grasp the piece with the left hand below and near the upper band, seize the rammer with the thumb and forefinger of the right hand bent, the other fingers closed.

Second Motion.—Draw the rammer, as has been explained in *loading*, and let it glide to the bottom of the bore, replace the piece with the left hand opposite the right shoulder, and retake the position of *ordered arms*.

The instructor will then inspect in succession the piece of each recruit, in passing along the front of the rank. Each, as the instructor reaches him, will

raise smartly his piece with his right hand, seize it with the left between the lower band and guide sight, the lock to the front, the left hand at the height of the chin, the piece opposite to the left eye; the instructor will take it with the right hand at the handle, and, after inspecting it, will return it to the recruit, who will receive it back with the right hand, and replace it in the position of *ordered arms.*

When the instructor shall have passed him, each recruit will retake the position prescribed at the command *inspection*, return the rammer, *unfix the bayonet*, and resume the position of *ordered arms.*

If, instead of *inspection of arms*, the instructor should merely wish to cause bayonets to be fixed, he will command:

Fix—BAYONET.

Take the position indicated, fix bayonets as has been explained, and immediately resume the position of *ordered arms.*

If it be the wish of the instructor, after firing, to ascertain whether the pieces have been discharged, he will command:

Spring—RAMMERS.

Put the rammer in the barrel, as has been explained above, and immediately retake the position of *ordered arms.*

The instructor, for the purpose stated, can take the rammer by the small end, and spring it in the barrel, or cause each recruit to make it ring in the barrel.

Each recruit, after the instructor passes him, will return rammer, and resume the position of *ordered arms.*

THE FOLLOWING INSTRUCTION IS TO BE GIVEN TO RECRUITS WITHOUT REGARD TO ARMS.

When, after some days of exercise in the manual of arms, the four men shall well be established in their use, the instructor will always terminate the lesson by marching the men for some time in one rank, and at one pace apart, in common quick time, in order to confirm them more and more in the mechanism of the step; he will also teach them to mark time and to change step, which will be executed in the following manner:

To mark time.

The four men marching in the direct step, the instructor will command:

1. *Mark time.* 2. MARCH.

At the second command, which will be given at the instant a foot is coming to the ground, the recruits will make a semblance of marching, by bringing the heels by the side of each other, and observing the cadence of the step, by raising each foot alternately without advancing.

The instructor, wishing the direct step to be resumed, will command:

1. *Forward.* 2. MARCH.

At the second command, which will be given as prescribed above, the recruits will retake the step of twenty-eight inches.

To change step.

The squad being in march, the instructor will command:

1. *Change step.* 2. MARCH.

At the second command, which will be given at the instant either foot is coming to the ground, bring the foot which is in rear by the side of that which is in front, and step off again with the foot which was in front.

To march backward.

The squad being at a halt, if the instructor should wish to march it in the back step, he will command:

1. *Squad backward.* 2. *Guide left* (or *right*). 3. MARCH.

The back step will be executed by the step of fourteen inches to the rear.

The instructor, in this step, will be watchful that the men do not lean on each other.

As the march to the front in quick time should only be executed at shouldered arms, the instructor, in order not to fatigue the men too much, and also to prevent negligence in gait and position, will halt the squad from time to time, and cause arms to be ordered.

In marching at *double quick time*, the men will always carry their pieces on the *right shoulder* or at a *trail*. *This rule is general.*

If the instructor shall wish the pieces carried at a trail he will give the command *trail arms*, before the command *double quick*. If, on the contrary, this command be not given, the men will shift their pieces to the right shoulder at the command *double quick*. In either case, at the command *halt*, the

men will bring their pieces to the position of *shoulder arms*. *This rule is general.*

To load in four times.

The object of this lesson is to prepare the recruits to load at will, and to cause them to distinguish the times which require the greatest regularity and attention, such as *charge cartridge*, *ram cartridge*, and *prime*. It will be divided as follows:

The first time will be executed at the end of the command; the three others at the commands, *two*, *three*, and *four*.

The instructor will command:

1. *Load in four times.* 2. LOAD.

Execute the times to include charge cartridge.

Two.

Execute the times to include ram cartridge.

Three.

Execute the times to include prime.

Four.

Execute the time of *shoulder arms*.

To load at will.

The instructor will next teach loading at will, which will be executed as loading in four times, but continued, and without resting on either of the times. He will command:

1. *Load at will.* 2. LOAD.

The instructor will habituate the recruits, by degrees, to load with the greatest possible promptitude, each without regulating himself by his neighbor, and above all without waiting for him.

The cadence prescribed is not applicable to loading in four times, or at will.

The squad will now be instructed in the firings, to which great care must be bestowed by the instructor; particularly when using cartridges, as the recruit is apt to load in an excited manner, and by slurring the motions lose time and interfere with the adjoining files.

Firings.

The firings are direct or oblique, and will be executed as follows:

The direct fire.

The instructor will give the following commands:

1. *Fire by squad.* 2. *Squad.* 3. READY. 4. AIM. 5. FIRE. 6. LOAD.

These several commands will be executed as has been prescribed in the *Manual of Arms*. At the

third command, the men will come to the position of *ready*, as heretofore explained. At the fourth, they will aim according to the rank in which each may find himself placed, the rear-rank men inclining forward a little the upper part of the body, in order that their pieces may reach as much beyond the front rank as possible.

At the sixth command they will load their pieces and return immediately to the position of *ready*.

The instructor will re-commence the firing by the commands:

1. *Squad.* 2. AIM. 3. FIRE. 4. LOAD.

When the instructor wishes the firing to cease, he will command:

Cease firing.

At this command, the men will cease firing.

If they have fired, they will load their pieces and bring them to a shoulder; if at the position of *ready*, they will half-cock and shoulder arms. If in the position of aim, they will bring down their pieces, half-cock, and shoulder arms.

Oblique firings.

The oblique firings will be executed to the right and left, and by the same commands as the direct fire, with this single difference—the command *aim* will always be preceded by the caution, *right* or *left oblique*.

Position of the two ranks in the Oblique Fire to the right.

At the command *ready*, the two ranks will execute what has been prescribed for the direct fire.

At the cautionary command, *right oblique*, the two ranks will throw back the right shoulder and look steadily at the object to be hit.

At the command *aim*, each front rank man will aim to the right without deranging the feet; each rear rank man will advance the left foot about eight inches toward the right heel of the next man on the right of his file leader and aim to the right, inclining the upper part of the body forward and bending a little the left knee.

Oblique fire to the left is executed as above prescribed, except that the left shoulder is thrown back and the rear rank man steps off with his right foot, eight inches toward the right heel of the man on the right of his file leader.

To fire by file.

The fire by file will be executed by the two ranks, the files of which will fire successively, and without regulating on each other, except for the first fire. The instructor will command:

1. *Fire by file.* 2. *Squad.* 3. READY. 4. COMMENCE FIRING.

At the third command, the two ranks will take the position prescribed in the direct fire

At the fourth command, the file on the right will aim and fire.

The men of this file will load their pieces briskly and fire a second time; reload and fire again, and so on, in continuation.

The second file will aim at the instant the first

against the right thigh; carry the piece to the rear rising on the knee, the barrel downward, the butt resting on the ground; in this position support the piece with the left hand at the upper band, draw cartridge with the right and load the piece, ramming the ball, if necessary, with both hands.

When loaded bring the piece to the front with the left hand, which holds it at the upper band; seize it, at the same time, with the right hand at the small of the stock; turn the piece, the barrel uppermost and nearly horizontal, the left elbow resting on the left thigh; half-cock, remove the old cap and prime, rise, and return to the ranks.

The second man will then be taught what has just been prescribed for the first, and so on, through the remainder of the squad.

To fire and load lying.

In this exercise the squad will be in one rank and loaded; the instruction will be given individually and without times or motions.

The instructor will command:

FIRE AND LOAD LYING.

At this command, the man on the right of the squad will move toward three paces and halt; he will then bring his piece to an order, drop on both knees, and place himself on the ground flat on his belly. In this position he will support the piece nearly horizontal with the left hand, holding it near the lower band, the butt end of the piece and the left elbow resting on the ground, the barrel uppermost; cock the piece with the right hand, and carry this hand to the small of the stock; raise the piece with both hands, press the butt against the shoulder, and resting on both elbows, *aim* and *fire*.

As soon as he has fired, bring the piece down and

turn upon his left side, still resting on his left elbow; bring back the piece until the cock is opposite his breast, the butt end resting on the ground; take out a cartridge with the right hand; seize the small of the stock with this hand, holding the cartridge with the thumb and first two fingers; he will then throw himself on his back, still holding the piece with both hands; carry the piece to the rear, place the butt between the heels, the barrel up, the muzzle elevated. In this position, charge cartridge, draw rammer, ram cartridge, and return rammer.

When finished loading, the man will turn again upon his left side, remove the old cap and prime, then raise the piece vertically, rise, turn about, and resume his position in the ranks.

The second man will be taught what has just been prescribed for the first, and so on, throughout the squad.

LESSON IV.

BAYONET EXERCISE.

The bayonet exercise in this book will be confined to two movements, the *guard against infantry*, and the *guard against cavalry*. The men will be placed in one rank, with two paces interval, and, being at shoulder arms, the instructor will command:

1. *Guard against Infantry.* 2. GUARD.

One time and two motions.—(Plate 35.)

(*First motion.*) Make a half face to the right, turning on both heels, the feet square to each other;

Plate 35.

at the same time raise the piece slightly, and seize it with the left hand above and near the lower band.

(*Second motion.*) Carry the right foot twenty inches perpendicularly to the rear, the right heel on the prolongation of the left, the knees slightly bent, the weight of the body resting equally on both legs; lower the piece with both hands, the barrel uppermost, the left elbow against the body; seize the piece at the same time with the right hand at the small of the stock, the arms falling naturally, the point of the bayonet slightly elevated.

Shoulder—ARMS.

One time and one motion.

Throw up the piece with the left hand, and place it against the right shoulder, at the same time bring the right heel by the side of the left and face to the front.

1. *Guard against Cavalry.* 2. GUARD.

One time and two motions.—(Plate 36.)

Both motions the same as for *guard against infantry*, except that the right hand will be supported

Plate 34.

against the hip, and the bayonet held at the height of the eye, as in *charge bayonet*.

Shoulder—ARMS.

One time and one motion.

Spring up the piece with the left hand and place it against the right shoulder, at the same time bring the right heel by the side of the left, and face to the front.

PART THIRD.

When the recruits are well established in the *principles and mechanism of the step, the position of the body*, and *the manual of arms*, the instructor will unite eight men, at least, and twelve men, at most, in order to teach them the principles of alignment, the principles of the touch of elbows in marching to the front, the principles of the march by the flank, wheeling from a halt, wheeling in marching, and the change of direction to the side of the guide. He will place the squad in one rank elbow to elbow, and number the men from right to left.

LESSON I.

Alignments.

The instructor will at first teach the recruits to align themselves man by man, in order the better to make them comprehend the principles of alignment; to this end, he will command the two men on the right flank to march two paces to the front, and having aligned them, he will caution the remainder of the squad to move up, as they may be successively called, each by his number, and align themselves successively on the line of the first two men.

Each recruit, as designated by his number, will turn the head and eyes to the right as prescribed in the first lesson of the first part, and will march in *quick time two paces forward*, shortening the last, so as to find himself about six inches behind the new alignment, which he ought never to pass; he *will* next move up steadily by steps of two or three inches, the hams extended, to the side of the man next to him on the alignment, so that, without deranging the head, the line of the eyes, or that of the shoulders, he may find himself in the exact line of his neighbor, whose elbow he will lightly touch without opening his own.

The instructor seeing the rank well aligned, will command:

FRONT.

At this, the recruits will turn eyes to the front, and remain firm.

Alignments to the left will be executed on the same principles.

When the recruits shall have thus learned to align themselves man by man, correctly, and without

groping or jostling, the instructor will cause the entire rank to align itself at once by the command:

Right (or *left*)—DRESS.

At this, the rank, except the two men placed in advance as a basis of alignment, will move up in *quick time*, and place themselves on the new line, according to the principles prescribed.

The instructor, placed five or six paces in front, and facing the rank, will carefully observe that the principles are followed, and then pass to the flank that has served as the basis, to verify the alignment.

The instructor, seeing the greater number of the rank aligned, will command:

FRONT.

The instructor may afterward order *this* or *that* file *forward* or *back*, designating each by its number. The file or files designated, only, will slightly turn the head toward the basis, to judge how much they ought to move up or back, steadily place themselves on the line, and then turn eyes to the front, without a particular command to that effect.

Alignments to the rear will be executed on the same principles, the recruits stepping back a little beyond the line, and then dressing up according to the principles prescribed, the instructor commanding:

Right (or *left*) *backward*—DRESS.

After each alignment, the instructor will examine the position of the men, and cause the rank to come to *ordered arms*, to prevent too much fatigue, and also the danger of negligence at *shouldered arms*.

LESSON II.

The men having learned, in the first and second parts, to march with steadiness in common time, and to take steps equal in length and swiftness, will be exercised in the third part only in *quick time*, *double quick time*, and the *run*; the instructor will cause them to execute successively, at these different gaits, the march to the front, the facing about in marching, the march by the flank, the wheels at a halt and in marching, and the changes of direction to the side of the guide.

The instructor will inform the recruits that at the command *march*, they will always move off in *quick time*, unless this command should be preceded by that of *double quick*.

To march to the front.

The rank being correctly aligned, when the instructor shall wish to cause it to march by the front, he will place a well-instructed man on the right or the left, according to the side on which he may wish the guide to be, and command:

1. *Squad, forward.* 2. *Guide right* (or *left*).
3. MARCH.

At the command *march*, the rank will step off smartly with the left foot; the guide will take care to march straight to the front, keeping his shoulders always in a square with that line.

The instructor will observe, in marching to the front, that the men touch lightly the elbow toward the side of the guide.

The men being well established in the principles of the direct march, the instructor will exercise them in marching obliquely. The rank being in march, the instructor will command:

1. *Right* (or *left*) *oblique.* 2. MARCH.

At the second command, each man will make a half face to the right (or left), and will then march straight forward in the new direction. As the men no longer touch elbows, they will glance along the shoulders of the nearest files, toward the side to which they are obliquing, and will regulate their steps so that the shoulders shall always be behind that of their next neighbor on that side, and that his head shall conceal the heads of the other men in the rank. Besides this, the men should preserve the same length of pace, and the same degree of obliquity.

The instructor wishing to resume the primitive direction, will command:

1. *Forward.* 2. MARCH.

At the second command, each man will make a half face to the left (or right), and all will then march straight to the front, conforming to the principles of the direct march.

To march to the front in double quick time.

When the several principles, heretofore explained, have become familiar to the recruits, and they shall be well established in the position of the body, the bearing of arms, and the mechanism, length, and swiftness of the step, the instructor will pass them from *quick* to *double quick* time, and the reverse, observing not to make them march obliquely in double quick time, till they are well established in the cadence of this step.

The squad being at a march in quick time, the instructor will command:

1. *Double quick.* 2. MARCH.

At the command *march*, which will be given when either foot is coming to the ground, the squad will step off in double quick time. The men will endeavor to follow the principles laid down in the first part of this book, and to preserve the alignment.

When the instructor wishes the squad to resume the step in quick time, he will command:

1. *Quick time.* 2. MARCH.

At the command *march*, which will be given when either foot is coming to the ground, the squad will retake the step in quick time.

The squad being at a halt, the instructor will cause it to march in double quick time, by preceding the command *march*, by *double quick.*

The instructor will endeavor to regulate well the cadence of this step.

To face about in marching.

If the squad be marching in quick, or double quick time, and the instructor should wish to march it in retreat, he will command:

1. *Squad, right about.* 2. MARCH.

At the command *march*, which will be given at the instant the left foot is coming to the ground, the recruit will bring this foot to the ground, and turning on it, will face to the rear; he will then place the right foot in the new direction, and step off with the left foot.

In marching at *double quick time*, the men will always carry their pieces on the *right shoulder*, or at a *trail*. *This rule is general.*

If the instructor shall wish the pieces carried at

a trail, he will give the command *trail arms*, before the command *double quick*. If, on the contrary, this command be not given, the men will shift their pieces to the right shoulder at the command *double quick*. In either case, at the command *halt*, the men will bring their pieces to the position of *shoulder arms*. *This rule is general.*

LESSON III.

To march by the flank.

The rank being at a halt, and correctly aligned, the instructor will command:

1. *Squad, right*—FACE. 2. *Forward.* 3. MARCH.

At the last part of the first command, the rank will face to the right; the even numbered men, after facing to the right, will step quickly to the right side of the odd numbered men, the latter standing fast, so that when the movement is executed, the men will be formed into files of two men abreast.

At the third command, the squad will step off smartly with the left foot; the files keeping aligned, and preserving their intervals.

The march by the left flank will be executed by the same commands, substituting the word *left* for *right*, and by inverse means; in this case, the even numbered men, after facing to the left, will stand fast, and the odd numbered will place themselves on their left.

The instructor will place a well instructed soldier by the side of the recruit who is at the head of the rank, to regulate the step, and to conduct him; and it will be enjoined on this recruit to march always elbow to elbow with the soldier.

1. *Squad.* 2. HALT. 3. FRONT.

At the second command, the rank will halt, and afterward no man will stir, although he may have lost his distance. This prohibition is necessary, to habituate the men to a constant preservation of their distances.

At the third command, each man will front by facing to the left, if marching by the right flank, and by a face to the right, if marching by the left flank. The rear rank men will at the same time move quickly into their places, so as to form the squad again into one rank.

When the men have become accustomed to marching by the flank, the instructor will cause them to change direction by file; for this purpose he will command:

1. *By file left* (or *right.*) 2. MARCH.

At the command *march*, the first file will change direction to the left (or right) in describing a small arc of a circle, and will then march straight forward; the two men of this file in wheeling, will keep up the touch of the elbows, and the man on the side to which the wheel is made, will shorten the first three or four steps. Each file will come successively to wheel on the same spot where that which preceded it wheeled.

The instructor will also cause the squad to face by the right or left flank in marching, and for this purpose will command:

1. *Squad by the right* (or *left*) *flank.* 2. MARCH.

At the second command, which will be given a little before either foot comes to the ground, the recruits will turn the body, plant the foot that is

raised in the new direction, and step off with the other foot without altering the cadence of the step; the men will double or undouble rapidly.

If, in facing by the right or the left flank, the squad should face to the rear, the men will come into one rank, as prescribed for facing to the front. It is to be remarked that it is the men who are in rear who always move up to form into single rank, and in such manner as never to invert the order of the numbers in the rank.

If, when the squad has been faced to the rear, the instructor should cause it to face by the left flank, it is the even numbers who will double by moving to the left of the odd numbers; but if by the right flank, it is the odd numbers who will double to the right of the even numbers.

This lesson, like the preceding one, will be practiced with pieces at a shoulder; but the instructor may, to give relief by change, occasionally order *support arms*, and he will require of the recruits marching in this position, as much regularity as in the former.

The march by the flank in double quick time.

The principles of the march by the flank in double quick time, are the same as in quick time. The instructor will take care always to give the command *double quick* before that of *march*.

LESSON IV.

WHEELINGS.

General Principles of Wheeling.

Wheelings are of two kinds: from halts, or on fixed pivots, and in march, or on movable pivots.

Wheeling on a fixed pivot takes place in passing a corps from the order in battle to the order in column, or from the latter to the former.

Wheels in marching take place in changes of direction in column, as often as this movement is executed to the side opposite to the guide.

In wheels from a halt, the pivot-man only turns in his place, without advancing or receding.

In the wheels in marching, the pivot takes steps of nine or eleven inches, according as the squad is marching in quick or double quick time, so as to clear the wheeling point, which is necessary, in order that the subdivisions of a column may change direction without losing their distances, as will be explained in the school of the company.

The man on the wheeling flank will take the full step of twenty-eight inches, or thirty-three inches, according to the gait.

Wheeling from a halt, or on a fixed pivot.

The rank being at a halt, the instructor will place a well-instructed man on the wheeling flank to conduct it, and then command:

1. *By squad, right wheel.* 2. MARCH.

At the second command, the rank will step off with the left foot, turning at the same time the head a little to the left, the eyes fixed on the line of the eyes of the men to their left; the pivot-man will merely mark time in gradually turning his body, in order to conform himself to the movement of the marching flank; the man who conducts this flank will take steps of twenty-eight inches, and from the first step advance a little the left shoulder, cast his eyes from time to time along the rank, and feel constantly the elbow of the next man lightly, but never push him.

The other men will feel lightly the elbow of the next man toward the pivot, resist pressure coming from the opposite side, and each will conform himself to the marching flank—shortening his step according to his approximation to the pivot.

The instructor will make the rank wheel round the circle once or twice before halting, in order to cause the principles to be the better understood, and he will be watchful that the center does not break.

He will cause the wheel to the left to be executed according to the same principles.

When the instructor shall wish to arrest the wheel, he will command:

1. *Squad.* 2. HALT.

At the second command, the rank will halt, and no man stir. The instructor, going to the flank, opposite the pivot, will place the two outer men of that flank in the direction he may wish to give to the rank, without, however, displacing the pivot, who will conform the line of his shoulders to this direction. The instructor will take care to have between these two men, and the pivot, only the space necessary to contain the other men. He will then command:

Left (or *right*)—DRESS.

At this, the rank will place itself on the alignment of the two men established as the basis, in conformity with the principles prescribed.

The instructor will next command FRONT.

REMARKS ON THE PRINCIPLES OF THE WHEEL, FROM A HALT.

Turn a little the head toward the marching flank, and fix the eyes on the line of the eyes of the men who are on that side.

Because, otherwise, it would be impossible for each man to regulate the length of his step so as to conform his own movement to that of the marching flank.

Touch lightly the elbow of the next man toward the pivot;

In order that the files may not open out in the wheel.

Resist pressure that comes from the side of the marching flank;

Because, if this principle be neglected, the pivot, which ought to be a fixed point, in wheels from a halt, might be pushed out of its place by pressure.

Wheeling in marching, or on a movable pivot.

When the recruits have been brought to execute well the wheel from a halt, they will be taught to wheel in marching.

To this end, the rank being in march, when the instructor shall wish to cause it to change direction to the reverse flank (to the side opposite to the guide or pivot flank), he will command:

1. *Right* (or *left*) *wheel.* 2. MARCH.

The first command will be given when the rank is yet *four* paces from the wheeling point.

At the second command the wheel will be exe-

cuted in the same manner as from a halt, except that the touch of the elbow will remain toward the marching flank (or side of the guide) instead of the side of the actual pivot; that the pivot-man, instead of merely turning in his place, will conform himself to the movement of the marching flank, and feel lightly the elbow of the next man, take steps of full nine inches, and thus gain ground forward in describing a small curve so as to clear the point of the wheel. The middle of the rank will bend slightly to the rear. As soon as the movement shall commence, the man who conducts the marching flank will cast his eyes on the ground over which he will have to pass.

The wheel being ended, the instructor will command:

1. *Forward.* 2. MARCH.

The first command will be pronounced when *four* paces are yet required to complete the change of direction.

At the command *march*, which will be given at the instant of completing the wheel, the man who conducts the marching flank will direct himself straight forward; the pivot-man and all the rank will retake the step of twenty-eight inches, and bring the head direct to the front.

Turning, or change of direction to the side of the guide.

The change of direction to the side of the guide, in marching, will be executed as follows: The instructor will command:

1. *Left* (or *right*) *turn.* 2. MARCH.

The first command will be given when the rank is yet *four* paces from the turning point.

At the command *March*, to be pronounced at the instant the rank ought to turn, the guide will face to the left (or right) in marching, and move forward in the new direction without slackening or quickening the cadence, and without shortening or lengthening the step.

The whole rank will promptly conform itself to the new direction; to effect which, each man will advance the shoulder opposite to the guide, take the double quick step, to carry himself in the new direction, turn the head and eyes to the side of the guide, and retake the touch of the elbow on that side, in placing himself on the alignment of the guide, from whom he will take the step, and then resume the direct position of the head. Each man will thus arrive successively on the alignment.

Wheeling and changing direction to the side of the guide in double quick time.

When the recruits comprehend and execute well, in quick time, the wheels at a halt and in marching, and the change of direction to the side of the guide, the instructor will cause the same movements to be repeated in double quick time.

These various movements will be executed by the same commands and according to the same principles as in quick time, except that the command *double quick* will precede that of *march*. In wheeling while marching, the pivot will take steps of eleven inches, and in the changes of direction to the side of the guide, the men on the side opposite the guide must increase the gait in order to bring themselves into line.

LESSON V.

Long marches in double quick time and the run.

The instructor will cause to be resumed the exercises in double quick time and the run, with arms and knapsacks.

He will cause long marches to be executed in double quick time, both by the front and by the flank, and by constant practice will lead the men to pass over a distance of five miles in sixty minutes. The pieces will be carried on either shoulder, and sometimes at a trail.

He will also exercise them in long marches at a run, the pieces carried at will; the men will be instructed to keep as united as possible, without, however, exacting much regularity, which is impracticable.

The run, in actual service, will only be resorted to when it may be highly important to reach a given point with great promptitude.

To stack arms.

The men being at order arms with bayonets unfixed, the instructor will command:

Stack—ARMS.

At this command, the front-rank man of every even-numbered file will pass his piece before him, seizing it with the left hand near the upper band; will place the butt a little in advance of his left toe, the barrel turned toward the body, and draw the rammer slightly from its place; the front-rank man of every odd-numbered file will also draw the rammer slightly, and pass his piece to the man next on his left, who will seize it with the right hand near

the upper band, and place the butt a little in advance of the right toe of the man next on his right, the barrel turned to the front; he will then cross the rammers of the two pieces, the rammer of the piece of the odd-numbered man being inside; the rear-rank man of every even file will also draw his rammer, lean his piece forward, the lock-plate downward, advance the right foot about six inches, and insert the rammer between the rammer and barrel of the piece of his front-rank man; with his left hand he will place the butt of his piece on the ground, thirty-two inches in rear of, and perpendicular to, the front rank, bringing back his right foot by the side of the left; the front-rank man of every even file will at the same time lean the stack to the rear, quit it with his right hand, and force all the rammers down. The stack being thus formed, the rear-rank man of every odd file will pass his piece into his left hand, the barrel to the front, and inclining it forward, will rest it on the stack.

Plate 37.

Plate 37 shows the formation of the stack: *A*, is the piece of the even front-rank man; *B*, the piece of the odd front-rank man; *C*, the piece of the rear-rank man, of the even file.

If the rifle musket be used, and it is required to stack arms with the bayonets fixed, the following will be the method:—Plate 37.

At the command *stack arms*, the front-rank man of every even-numbered file will pass his piece before him, seizing it with the left hand above the middle band, and place the butt behind and

near the right foot of the man next on the left, the barrel turned to the front. At the same time the front-rank man of every odd-numbered file will pass his piece before him, seizing it with the left hand below the middle band, and hand it to the man next on the left; the latter will receive it with the right hand two inches above the middle band, throw the butt about thirty-two inches to the front, opposite to his right shoulder, inclining the muzzle toward him, and lock the shanks of the two bayonets: the lock of this second piece toward the right, and its shank above that of the first piece. The rear-rank man of every even file will project his bayonet forward, and introduce it (using both hands) between and under the shanks of the two other bayonets. he will then abandon the piece to his file leader, who will receive it with the right hand under the middle band, bring the butt to the front, holding up his own piece and the stack with the left hand, and place the butt of this third piece between the feet of the man next on the right, the S plate to the rear. The stack thus formed, the rear-rank man of every odd file will pass his piece into his left hand, the barrel turned to the front, and, sloping the bayonet forward, rest it on the stack.

The men of both ranks having taken the position of the soldier without arms, the instructor will command:

1. *Break ranks.* 2. MARCH.

To resume arms.

Both ranks being re-formed in rear of their stacks, the instructor will command:

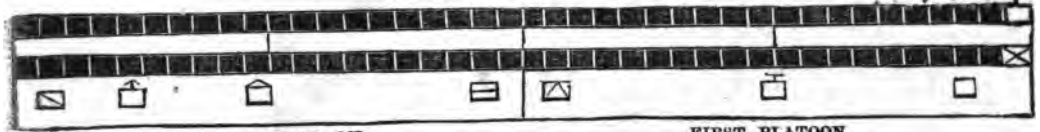
Take—ARMS.

At this command, the rear-rank man of every odd-numbered file will withdraw his piece from the

stack; the front-rank man of every even file will seize his own piece with the left hand and that of the man on his right with his right hand, both above the lower band; the rear-rank man of the even file will seize his piece with the right hand below the lower band (if the rifle musket be used the piece will be seized at the middle band); these two men will raise up the stack to loosen the rammers, or shanks of the bayonets. The front-rank man of every odd file will facilitate the disengagement of the rammers, if necessary, by drawing them out slightly with the left hand, and will receive his piece from the hand of the man next on his left; the four men will re-take the position of the soldier at order arms.

END OF THE SCHOOL OF THE SOLDIER.

FRONT.



Captain.
First Lieutenant.
Second Lieutenant.
Third Lieutenant.
First Sergeant.
Second Sergeant.
Third Sergeant.
Fourth Sergeant.
Fifth Sergeant.

FORMATION OF A COMPANY.

SCHOOL OF THE COMPANY.

Posts of Company Officers, Sergeants, and Corporals.

1. The company officers and sergeants are nine in number, and will be posted in the following manner:

2. The *captain* on the right of the company, touching with the left elbow.

3. The *first sergeant* in the rear rank, touching with the left elbow, and covering the captain. In the maneuvers he will be denominated *covering sergeant*, or *right guide* of the company.

4. The remaining officers and sergeants will be posted as file closers, and two paces behind the rear rank.

5. The *first lieutenant*, opposite the center of the fourth section.

6. The *second lieutenant*, opposite the center of the first platoon.

7. The *third lieutenant*, opposite the center of the second platoon.

8. The *second sergeant*, opposite the second file from the left of the company. In the maneuvers he will be designated *left guide* of the company.

9. The *third sergeant*, opposite the second file from the right of the second platoon.

10. The *fourth sergeant*, opposite the second file from the left of the first platoon.

11. The *fifth sergeant*, opposite the second file from the right of the first platoon.

12. In the left or tenth company of the battalion,

the second sergeant will be posted in the front rank, and on the left of the battalion.

13. The corporals will be posted in the front rank, on the right and left of platoons, according to height; the tallest corporal and the tallest man will form the first file, the next two tallest men will form the second file, and so on to the last file, which will be composed of the shortest corporal and the shortest man.

14. Absent officers and sergeants will be replaced —officers by sergeants, and sergeants by corporals. The colonel may detach a first lieutenant from one company to command another, of which both the captain and first lieutenant are absent; but this authority will give no right to a lieutenant to demand to be so detached.

15. The odd and even files, numbered as one, two, in the company from right to left, will form groups of four men, who will be designated *comrades in battle.*

General Rules and Division of the School of the Company.

16. Instruction by company will always precede that by battalion, and the object being to prepare the soldiers for the higher school, the exercises of detail by company will be strictly adhered to, as well in respect to principles, as the order of progression herein prescribed.

17. There will be attached to a company undergoing elementary instruction, a captain, a covering sergeant, and a certain number of file closers, the whole posted in the manner indicated, page 111, and, according to the same, the officer charged with the exercise of such company will herein be denominated the *instructor.*

18. The School of the Company will be divided

into six lessons, and each lesson will comprehend five articles, as follows:

LESSON I.

1. To open ranks.
2. Alignments in open ranks.
3. Manual of arms.
4. To close ranks.
5. Alignments and manual of arms in closed ranks.

LESSON II.

1. To load in four times and at will.
2. To fire by company.
3. To fire by file.
4. To fire by rank.
5. To fire by the rear rank.

LESSON III.

1. To march in line of battle.
2. To halt the company marching in line of battle, and to align it.
3. Oblique march in line of battle.
4. To mark time, to march in double quick time, and the back step.
5. To march in retreat in line of battle.

LESSON IV.

1. To march by the flank.
2. To change direction by file.
3. To halt the company marching by the flank, and to face it to the front.
4. The company being in march by the flank, to form it on the right or left by file into line of battle.
5. The company marching by the flank, to form it by company or platoon into line, and cause it to face to the right and left, and file to the left and right in marching.

Lesson V.

1. To break into column by platoon either at a halt or while marching.
2. To march in column.
3. To change direction.
4. To halt the column.
5. Being in column by platoon, to form to the right or left into line of battle, either at a halt or marching.

Lesson VI.

1. To break into platoons, and to re-form the company.
2. To break files to the rear, and to cause them to re-enter into line.
3. To march in column *in route*, and to execute the movements incident thereto.
4. Countermarch.
5. Being in column, by platoon, to form on the right or left into line of battle.

19. The company will always be formed in two ranks. The instructor will then cause the files to be numbered, and for this purpose will command:

In each rank—Count Twos.

20. At this command the men count in each rank, from right to left, pronouncing in a loud and distinct voice, in the same tone, without hurry and without turning the head, *one*, *two*, according to the place which each one occupies. He will also cause the company to be divided into platoons and sections, taking care that the first platoon is always composed of an even number of files.

21. The instructor will be as clear and concise as possible in his explanations; he will cause faults of detail to be rectified by the captain, to whom he will indicate them, if the captain should not him-

self have observed them; and the instructor will not otherwise interfere, unless the captain should not well comprehend or should badly execute his intentions.

22. Composure or presence of mind in him who commands, and in those who obey, being the first means of order in a body of troops, the instructor will labor to habituate the company to this essential quality, and will himself give the example.

LESSON FIRST.

ARTICLE I.

To open Ranks.

23. The company being at ordered arms, the ranks and file closers well aligned, when the instructor shall wish to cause the ranks to be opened, he will direct the left guide to place himself on the left of the front rank, which being executed, he will command:

1. *Attention.* 2. *Company.* 3. *Shoulder*—ARMS. 4. *To the rear open order.*

24. At the fourth command the covering sergeant and the left guide will step off smartly to the rear, four paces from the front rank, in order to mark the alignment of the rear rank. They will judge this distance by the eye, without counting the steps.

25. The instructor will place himself at the same time on the right flank, in order to observe if these two non-commissioned officers are on a line parallel to the front rank, and, if necessary, to correct their positions, which being executed, he will command:

5. MARCH.

26. At this command, the front rank will stand fast.

27. The rear rank will step to the rear without counting the steps, and will place themselves on the alignment marked for this rank, conforming to what is prescribed in the *School of the Soldier*, page 81.

28. The covering sergeant will align the rear rank on the left guide placed to mark the left of this rank.

29. The file closers will march to the rear at the same time with the rear rank, and will place themselves two paces from this rank when it is aligned.

30. The instructor seeing the rear rank aligned, will command:

6. FRONT.

31. At this command, the sergeant on the left of the rear rank will return to his place as a file closer.

32. The rear rank being aligned, the instructor will direct the captain and the covering sergeant to observe the men in their respective ranks, and to correct, if necessary, the positions of persons and pieces.

ARTICLE II.

Alignments in Open Ranks.

33. The ranks being open, the instructor will, in the first exercises, align the ranks, man by man, the better to inculcate the principles.

34. To effect this, he will cause two or four men on the right or left of each rank to march two or three paces forward, and, after having aligned them, command:

By file, right (or *left*)—DRESS.

35. At this, the men of each rank will move up successively on the alignment, each man being preceded by his neighbor in the same rank, toward the basis, by two paces, and, having correctly aligned himself, will cast his eyes to the front.

36. Successive alignments having habituated the soldiers to dress correctly, the instructor will cause the ranks to align themselves at once, forward and backward, sometimes in a direction parallel, and sometimes in one oblique, to the original direction, giving, in each case, two or four men to serve as a basis of alignment to each rank. To effect which, he will command:

1. *Right* (or *left*)—DRESS. 2. FRONT.

OR

1. *Right* (or *left*) *backward*—DRESS. 2. FRONT.

37. In oblique alignments, in *opened* ranks, the men of the rear rank will not seek to cover their file leaders, as the sole object of the exercise is to teach them to align themselves correctly in their respective ranks, in the different directions.

38. In the several alignments, the captain will superintend the front rank, and the covering sergeant the rear rank. For this purpose, they will place themselves on the side by which the ranks are dressed.

39. In oblique alignments, the men will conform the line of their shoulders to the new direction of their rank, and will place themselves on the alignment as has been prescribed in the *School of the Soldier*, according as the new direction shall be in front or rear of the original one.

40. At the end of each alignment, the captain and the covering sergeant will pass along the front of the ranks to correct the positions of persons and arms.

ARTICLE III.

Manual of Arms.

41. The ranks being open, the instructor will place himself in a position to see the ranks, and

will command the manual of arms in the following order:

Present arms.	*Shoulder arms.*
Order arms.	
Ground arms.	
Raise arms.	*Shoulder arms.*
Support arms.	*Shoulder arms.*
Fix bayonet.	*Shoulder arms.*
Charge bayonet.	*Shoulder arms.*
Trail arms.	*Shoulder arms.*
Unfix bayonet.	*Shoulder arms.*
Secure arms.	*Shoulder arms.*

Load in nine times.

42. The instructor will take care that the position of the body, of the feet, and of the piece be always exact, and that the times be briskly executed and close to the person.

ARTICLE IV.

To Close Ranks.

43. The manual of arms being ended, the instructor will command:

1. *Close order.* 2. MARCH.

44. At the command *march*, the rear rank will close up in quick time, each man directing himself on his file leader.

ARTICLE V.

Alignments, and Manual of Arms in Closed Ranks.

45. The ranks being closed, the instructor will cause to be executed parallel and oblique alignments by the right and left, forward and backward, observing to place always two or four files to serve as a basis of alignment. He will give the commands prescribed, No. 36.

46. In alignments in closed ranks, the captain

will superintend the front rank, and the covering sergeant the rear rank. They will habituate themselves to judge the alignment by the lines of the eyes and shoulders, in casting a glance of the eye along the front and rear of the ranks.

47. The moment the captain perceives the greater number of the front rank aligned, he will command FRONT, and rectify afterward, if necessary, the alignment of the other men by the means prescribed in the *School of the Soldier*. The rear rank will conform to the alignment of the front rank, superintended by the covering sergeant.

48. The ranks being steady, the instructor will place himself on the flank to verify their alignment. He will also see that each rear-rank man covers accurately his file-leader.

49. In oblique alignments, the instructor will observe what is prescribed, No. 39.

50. In all alignments, the file closers will preserve the distance of two paces from the rear rank.

51. The alignments being ended, the instructor will cause to be executed the manual of arms.

52. The instructor, wishing to rest the men, without deranging the alignment, will first cause arms to be supported, or ordered, and then command:

In place—REST.

53. At this command, the men will no longer be constrained to preserve silence or steadiness of position; but they will always keep one or other heel on the alignment.

54. If, on the contrary, the instructor should wish to rest the men without constraining them to preserve the alignment, he will command:

REST.

55. At which command, the men will not be re-

quired to preserve immobility, or to remain in their places.

56. The instructor may, also, when he shall judge proper, cause arms to be stacked, which will be executed as prescribed in the *School of the Soldier.*

LESSON SECOND.

57. The instructor wishing to pass the second lesson will cause the company to take arms, if stacks have been formed, and command:

1. *Attention.* 2. *Company.* 3. *Shoulder*—ARMS.

58. The instructor will then cause loadings and firings to be executed in the following order:

ARTICLE I.

To Load in Four Times and at Will.

59. Loading in four *times* will be commanded and executed as prescribed in the *School of the Soldier.* The instructor will cause this exercise to be often repeated, in succession, before passing to loading at will.

60. Loading at will will be commanded and executed as prescribed in the *School of the Soldier.* In priming when loading in four *times*, and also at will, the captain and covering sergeant will half face to the right with the men, and face to the front when the man next to them, respectively, brings his piece to the shoulder.

61. The instructor will labor to the utmost to cause the men, in the different loadings, to execute what has been prescribed in the *School of the Soldier.*

62. Loading at will, being that of battle, and consequently the one with which it is most import-

ant to render the men familiar, it will claim preference in the exercises the moment the men be well established in the principles. To these they will be brought by degrees, so that every man may be able to load with cartridges, and to fire at least three rounds in a minute with ease and regularity.

Article II.

To Fire by Company.

63. The instructor, wishing to cause the fire by company to be executed, will command:

1. *Fire by company.* 2. *Commence firing.*

64. At the first command, the captain will promptly place himself opposite the center of his company, and four paces in rear of the line of file closers: the covering sergeant will retire to that line, and place himself opposite to his interval. *This rule is general, for both the captain and covering sergeant, in all the different firings.*

65. At the second command, the captain will add: 1. *Company*; 2. Ready; 3. Aim; 4. Fire; 5. Load.

66. At the command *load*, the men will load their pieces, and then take the position of *ready*, as prescribed in the *School of the Soldier*.

67. The captain will immediately recommence the firing, by the commands:

1. *Company.* 2. Aim. 3. Fire. 4. Load.

68. The firing will be thus continued until the signal to cease firing is sounded.

69. The captain will sometimes cause aim to be taken to the right and left, simply observing to pronounce *right* (or *left*) *oblique*, before the command *aim*.

Article III.

The Fire by File.

70. The instructor wishing to cause the fire by file to be executed, will command:

1. *Fire by file.* 2. *Company.* 3. Ready. 4. *Commence firing.*

71. The third and fourth commands will be executed as prescribed in the *School of the Soldier.*

72. The fire will be commenced by the right file of the company; the next file will take aim at the instant the first brings down pieces to reload, and so on to the left; but this progression will only be observed in the first discharge, after which each man will reload and fire without regulating himself by others, conforming himself to what is prescribed in the *School of the Soldier.*

Article IV.

The Fire by Rank.

73. The instructor wishing the fire by rank to be executed, will command:

1. *Fire by rank.* 2. *Company.* 3. Ready. 4. *Rear rank*—Aim. 5. Fire. 6. Load.

74. The fifth and sixth commands will be executed as is prescribed in the *School of the Soldier*, page 84, and following.

75. When the instructor sees one or two pieces in the rear rank at a ready, he will command:

1. *Front rank.* 2. Aim. 3. Fire. 4. Load.

76. The firing will be continued thus by alternate ranks, until the signal is given to cease firing.

77. The instructor will sometimes cause aim to be taken to the right and left, conforming to what is prescribed, No. 69.

78. The instructor will cause the firing to cease, whether by company, by file, or by rank, by sounding the signal *to cease firing*, and at the instant this sound commences, the men will cease to fire—page 82.

79. The signal to cease firing will be always followed by a bugle note or tap; at which sound the captain and covering sergeant will promptly resume their places in line, and will rectify, if necessary, the alignment of the ranks.

80. In this school, except when powder is used, the signal to cease firing will be indicated by the command *cease firing*, which will be pronounced by the instructor when he wishes the semblance of firing to cease.

81. The command *posts* will be likewise substituted, under similar circumstances, for the bugle note or tap employed as the signal for the return of the captain and covering sergeant to their places in line, which command will be given when the instructor sees the men have brought their pieces to a shoulder.

82. The fire by file being that which is most frequently used against an enemy, it is highly important that it be rendered perfectly familiar to the troops. The instructor will, therefore, give it almost exclusive preference, and labor to cause the men to aim with care, and always, if possible, at some particular object. As it is of the utmost importance that the men should aim with precision in battle, this principle will be rigidly enforced in the exercises for purposes of instruction.

Article V.

To Fire by the Rear Rank.

83. The instructor will cause the several fires to

be executed to the rear, that is, by the rear rank. To effect this, he will command:

1. *Face by the rear rank.* 2. *Company.* 3. *About*—FACE.

84. At the first command, the captain will step out and place himself 16 inches from and facing the right file of his company; the covering sergeant and file closers will pass quickly through the captain's interval, and place themselves faced to the rear, the covering sergeant a pace behind the captain, and the file closers two paces from the front rank opposite to their places in line, each passing behind the covering sergeant.

85. At the third command, which will be given at the instant the last file closer shall have passed through the interval, the company will face about; the captain will place himself in his interval in the rear rank, now become the front, and the covering sergeant will cover him in the front rank, now become the rear.

86. The company having faced by the rear rank, the instructor will cause it to execute the fire by company, both direct and oblique, the fire by file, and the fire by rank, by the commands and means prescribed in the three preceding articles; the captain, covering sergeant, and the men will conform themselves, in like manner, to what is therein prescribed.

87. The fire by file will commence on the left of the company, now become the right. In the fire by rank, the firing will commence with the front rank, now become the rear.

88. To resume the proper front, the instructor will command:

1. *Face by the front rank.* 2. *Company.* 3. *About*—FACE.

89. At the first command, the captain, covering sergeant, and file-closers will conform to what is prescribed Nos. 84 and 85.

90. At the third command, the company having faced about, the captain and covering sergeant will resume their places in line.

91. In this lesson, the instructor will impress on the men the importance of aiming always at some particular object, and of holding the pieces as prescribed in the *School of the Soldier*.

92. The instructor will recommend to the captain to make a short pause between the commands *aim* and *fire*, to give the men time to aim with accuracy.

93. The instructor will place himself in position to see the two ranks, in order to detect faults; he will charge the captain and file closers to be equally watchful, and to report to him when the ranks are at rest. He will remand, for individual instruction, the men who may be observed to load badly.

94. The instructor will recommend to the soldiers, in the firings, the highest degree of composure or presence of mind; he will neglect nothing that may contribute to this end.

95. He will give to the men, *as a general principle*, to maintain, in the direct fire, the left heel in its place, in order that the alignment of the ranks and files may not be deranged; and he will verify, by examination, after each exercise in firing, the observance of this principle.

96. The instructor will observe, in addition to these remarks, all those which follow.

97. When the firing is executed with cartridges, it is particularly recommended that the men observe, in uncocking, whether smoke escapes from the tube, which is a certain indication that the piece has been discharged; but if, on the contrary, no smoke escapes, the soldier, in such case, instead of

reloading, will pick and prime again. If, believing the load to be discharged, the soldier should put a second cartridge in his piece, he ought, at least, to perceive it in ramming, by the height of the load; and he would be very culpable should he put in a third. The instructor will always cause arms to be inspected after firing with cartridges, in order to observe if the fault has been committed of putting three cartridges without a discharge in the same piece, in which case the ball screw will be applied.

98. It sometimes happens, when a cap has missed fire, that the tube is found stopped up with a hard, white, and compact powder; in this case picking will be dispensed with, and a new cap substituted for the old one.

LESSON THIRD.

ARTICLE I.

To Advance in Line of Battle.

99. The company being in line of battle, and correctly aligned, when the instructor shall wish to exercise it in marching by the front, he will assure himself that the shoulders of the captain and covering sergeant are perfectly in the direction of their respective ranks, and that the sergeant accurately covers the captain; the instructor will then place himself twenty-five or thirty paces in front of them, face to the rear, and place himself exactly on the prolongation of the line passing between their heels.

100. The instructor, being aligned on the directing file, will command:

1. *Company, forward.*

101. At this, a sergeant, previously designated, will move six paces in advance of the captain: the

instructor, from the position prescribed, will correctly align this sergeant on the prolongation of the directing file.

102. This advanced sergeant, who is to be charged with the direction, will, the moment his position is assured, take two points on the ground in the straight line, which would pass between his own and the heels of the instructor.

103. These dispositions being made, the instructor will step aside, and command:

2. MARCH.

104. At this, the company will step off with life. The directing sergeant will observe, with the greatest precision, the length and cadence of the step, marching on the two points he has chosen; he will take, in succession, and always a little before arriving at the point nearest to him, new points in advance, exactly in the same line with the first two, and at the distance of some fifteen or twenty paces from each other. The captain will march steadily in the trace of the directing sergeant, keeping always six paces from him; the men will each maintain the head direct to the front, feel lightly the elbow of his neighbor on the side of direction, and conform himself to the principles prescribed in the *School of the Soldier* for the march by the front.

105. The man next to the captain will take special care not to pass him; to this end, he will keep the line of his shoulders a little in the rear, but in the same direction with those of the captain.

106. The file closers will march at the habitual distance of two paces behind the rear rank.

107. If the men lose the step, the instructor will command:

To the—STEP.

108. At this command the men will glance toward the directing sergeant, retake the step from him and again direct their eyes to the front.

109. The instructor will cause the captain and covering sergeant to be posted sometimes on the right and sometimes on the left of the company.

110. The directing sergeant, in advance, having the greatest influence on the march of the company, he will be selected for the precision of his step, his habit of maintaining his shoulders in a square with a given line of direction, and of prolonging that line without variation.

111. If this sergeant should fail to observe these principles, undulations in the front of the company must necessarily follow; the men will be unable to contract the habit of taking steps equal in length and swiftness, and of maintaining their shoulders in a square with the line of direction—the only means of attaining perfection in the march in line.

112. The instructor, with a view the better to establish the men in the length and cadence of the step, and in the principles of the march in line, will cause the company to advance three or four hundred paces at once without halting, if the ground will permit. In the first exercises, he will march the company with open ranks, the better to observe the two ranks.

113. The instructor will see, with care, that all the principles of the march in line are strictly observed; he will generally be on the directing flank in a position to observe the two ranks, and the faults they may commit; he will sometimes halt behind the directing file during some thirty successive steps, in order to judge whether the directing sergeant or the directing file deviate from the perpendicular.

ARTICLE II.

To Halt the Company, Marching in Line of Battle, and to Align it.

114. The instructor, wishing to halt the company, will command:

1. *Company.* 2. HALT.

115. At the second command, the company will halt; the directing sergeant will remain in advance, unless ordered to return to the line of file closers. The company being at a halt, the instructor may advance the first three or four files on the side of direction, and align the company on that basis, or he may confine himself to causing the alignment to be rectified. In this last case, he will command: *Captain, rectify the alignment.* The captain will direct the covering sergeant to attend to the rear rank, when each, glancing his eyes along his rank, will promptly rectify it, conforming to what is prescribed in the *School of the Soldier*, page 52.

ARTICLE III.

Oblique March in Line of Battle.

116. The company being in the direct march, when the instructor shall wish to cause it to march obliquely, he will command:

1. *Right* (or *left*) *oblique.* 2. MARCH.

117. At the command *march*, the company will take the oblique step. The men will accurately observe the principles prescribed in the *School of the Soldier*. The rear-rank men will preserve their distances, and march in rear of the man next on the right (or left) of their habitual file leaders.

118. When the instructor wishes the direct march to be resumed, he will command:

1. *Forward.* 2. MARCH.

119. At the command *march*, the company will resume the direct march. The instructor will move briskly twenty paces in front of the captain, and facing the company, will place himself exactly in the prolongation of the captain and covering sergeant; and then, by a sign, will move the directing sergeant on the same line, if he be not already on it; the latter will immediately take two points on the ground between himself and the instructor, and as he advances, will take new points of direction, as is explained No. 104.

120. In the oblique march, the men not having the touch of elbows, the guide will always be on the side toward which the oblique is made, without any indication to that effect being given; and when the direct march is resumed, the guide will be equally without indication on the side where it was previous to the oblique.

121. The instructor will, at first, cause the oblique to be made toward the side of the guide. He will also direct the captain to have an eye on the directing sergeant, in order to keep on the same perpendicular line to the front with him, while following a parallel direction.

122. During the continuance of the march, the instructor will be watchful that the men follow parallel directions, in conforming to the principles prescribed in the *School of the Soldier*, for preserving the general alignment; whenever the men lose the alignment, he will be careful that they regain it by lengthening or shortening the step, without altering the cadence or changing the direction.

123. The instructor will place himself in front of the company and face to it, in order to regulate the march of the directing sergeant, or the man

who is on the flank toward which the oblique is made, and to see that the principles of the march are properly observed, and that the files do not crowd.

Article IV.

To Mark Time, to March in Double Quick Time, and the Back Step.

124. The company being in the direct march and in quick time, the instructor, to cause it to mark time, will command:

1. *Mark time.* 2. March.

125. To resume the march, he will command:

1. *Forward.* 2. March.

126. To cause the march in double quick time, the instructor will command:

1. *Double quick.* 2. March.

127. The command *march* will be pronounced at the instant either foot is coming to the ground.

128. To resume quick time, the instructor will command:

1. *Quick time.* 2. March.

129. The command *march* will be pronounced at the instant either foot is coming to the ground.

130. The company being at a halt, the instructor may cause it to march in the back step; to this effect, he will command:

1. *Company backward.* 2. March.

131. The back step will be executed according to the principles prescribed in the *School of the Soldier*, page 81, but the use of it being rare, the instructor will not cause more than fifteen or twenty steps to be taken in succession, and to that extent but seldom.

132. The instructor ought not to exercise the company in marching in double quick time till the men are well established in the length and swiftness of the pace in quick time; he will then endeavor to render the march of one hundred and sixty-five steps in the minute equally easy and familiar, and also cause them to observe the same erectness of body and composure of mind as if marching in quick time.

133. When marching in double quick time, if a subdivision (in a column) has to change direction by *turning*, or has to form into line, the men will quicken the pace to one hundred and eighty steps in a minute. The same swiftness of step will be observed under all circumstances where great rapidity of movement is required. But as ranks of men can not march any length of time at so swift a rate without breaking or confusion, this acceleration will not be considered a prescribed exercise, and accordingly companies or battalions will only be habitually exercised in the double quick time of one hundred and sixty-five steps in the minute.

Article V.

To March in Retreat.

134. The company being halted and correctly aligned, when the instructor shall wish to cause it o march in retreat, he will command:

1. *Company.* 2. *About*—Face.

135. The company having faced to the rear, the instructor will place himself in front of the directing file, conforming to what is prescribed No. 99.

136. The instructor, being correctly established on the prolongation of the directing file, will command:

3. *Company, forward.*

137. At this, the directing sergeant will conform himself to what is prescribed Nos. 101 and 102, with this difference—he will place himself six paces in front of the line of file closers, now leading.

138. The covering sergeant will step into the line of file closers, opposite to his interval, and the captain will place himself in the rear rank, now become the front.

139. This disposition being promptly made, the instructor will command:

4. March.

140. At this, the directing sergeant, the captain, and the men, will conform themselves to what is prescribed No. 101, and following.

141. The instructor will cause to be executed, marching in retreat, all that is prescribed for marching in advance; the commands and the means of execution will be the same.

142. The instructor having halted the company, will, when he may wish, cause it to face to the front, by the commands prescribed No. 134. The captain, the covering sergeant, and the directing sergeant will resume their habitual places in line, the moment they shall have faced about.

143. The company being in march by the front rank, if the instructor should wish it to march in retreat, he will cause the right about to be executed while marching, and to this effect will command:

1. *Company.* 2. *Right about.* 3. March.

144. At the third command, the company will promptly face about, and recommence the march by the rear rank.

145. The directing sergeant will face about with the company, and will move rapidly six paces in

front of the file closers, and upon the prolongation of the guide. The instructor will place him in the proper direction by the means prescribed No. 119. The captain, the covering sergeant, and the men will conform to the principles prescribed for the march in retreat.

146. When the instructor wishes the company to march by the front rank, he will give the same commands, and will regulate the direction of the march by the same means.

147. The company being in march either by the front or rear rank, and if the instructor should wish to face it about without continuing the march, he will command:

1. *Company.* 2. *Right about.* 3. HALT.

148. At the command *halt*, the company will face about, and the men will conform to what is prescribed in the *School of the Soldier*.

149. The instructor will cause to be executed in double quick time all the movements prescribed in the 3d, 4th, 5th, and 6th lessons of this school, with the exception of the march backward, which will be executed only in quick time. He will give the same commands, observing to add *double quick* before the command *march*.

150. When the pieces are carried on the right shoulder, in quick time, the distance between the ranks will be sixteen inches. Whenever, therefore, the instructor brings the company from a shoulder to this position, the rear rank must shorten a little the first steps in order to gain the prescribed distance, and will lengthen the steps, on the contrary, in order to close up when the pieces are again brought to a shoulder. In marching in double quick time, the distance between the ranks will be

twenty-six inches, and the pieces will be carried habitually on the right shoulder.

151. Whenever a company is halted, the men will bring their pieces at once to a shoulder at the command *halt.* The rear flank will close to its proper distance. *These rules are general.*

LESSON FOURTH.

ARTICLE I.

To March by the Flank.—Plate 37.

152. The company being in line of battle, and at a halt, when the instructor shall wish to cause it to march by the right flank, he will command:

1. *Company, right*—FACE.
2. *Forward.* 3. MARCH.

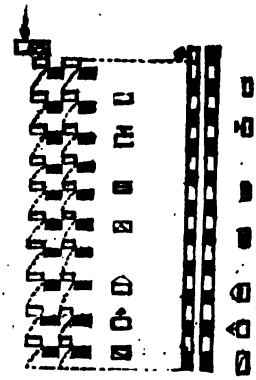


Plate 38. To march by flank doubling the files.

153. At the first command, the company will face to the right, the covering sergeant will place himself at the head of the front rank, the captain having stepped out for the purpose, so far as to find himself by the side of the sergeant, and on his left; the front rank will double, as is prescribed in the *School of the Soldier;* the rear rank will, at the same time, side-step to the right one pace, and double in the same manner; so that when the movement is completed, the files will be formed of four men aligned, and elbow to elbow. The intervals will be preserved.

154. The file closers will also move by side-step

to the right, so that when the ranks are formed, they will be two paces from the rearmost rank.

155. At the command *march*, the company will move off briskly in quick time; the covering sergeant at the head of the front rank, and the captain on his left, will march straight-forward. The men of each file will march abreast of their respective front-rank men, heads direct to the front; the file closers will march opposite their places in line of battle.

156. The instructor will cause the principles of the march by the flank to be observed, in placing himself, pending the march, as prescribed in the *School of the Soldier*.

157. The instructor will cause the march by the left flank to be executed by the same commands, substituting *left* for *right*; the ranks will double, as has been prescribed in the *School of the Soldier*; the rear rank will side-step to the left one pace before doubling.

158. At the instant the company faces to the left, the left guide will place himself at the head of the front rank; the captain will pass rapidly to the left and place himself by the right side of this guide; the covering sergeant will replace the captain in the front rank the moment the latter quits it to go to the left.

Article II.

To Change Direction by File.

159. The company being faced by the flank, and either in march, or at a halt, when the instructor shall wish to cause it to wheel by file, he will command:

1. *By file, left* (or *right*). 2. March.—Plate 39.

160. At the command *march*, the first file will wheel; if to the side of the front-rank man, the latter will take care not to turn at once, but to describe a short arc of a circle, shortening a little the first five or six steps in order to give time to the fourth man of this file to conform himself to the movement. If the wheel be to the side of the rear rank, the front-rank man will wheel in the step of twenty-eight inches, and the fourth man will conform himself to the movement by describing a short arc of a circle, as has been explained. Each file will come to wheel on the same ground where that which preceded it wheeled.

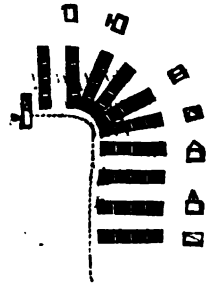


Plate 39. Filing to the left.

161. The instructor will see that the wheel be executed according to these principles, in order that the distance between the files may always be preserved, and that there be no check or hindrance at the wheeling point.

Article III.

To Halt the Company Marching by the Flank, and to Face it to the Front.

162. To effect these objects, the instructor will command:

1. *Company.* 2. Halt. 3. Front.

163. The second and third commands will be executed as prescribed in the *School of the Soldier*, p. 96. As soon as the files have undoubled, the rear rank will close to its proper distance. The captain and covering sergeant, as well as the left guide, if the march be by the left flank, will return to their habitual places in line, at the instant the company faces to the front.

164. The instructor may then align the company by one of the means prescribed No. 115.

Article IV.

The Company being in March by the Flank, to Form it on the Right (or Left) by File into Line of Battle.—Plate 40.

165. If the company be marching by the right flank, the instructor will command:

1. *On the right, by file into line.*
2. March.

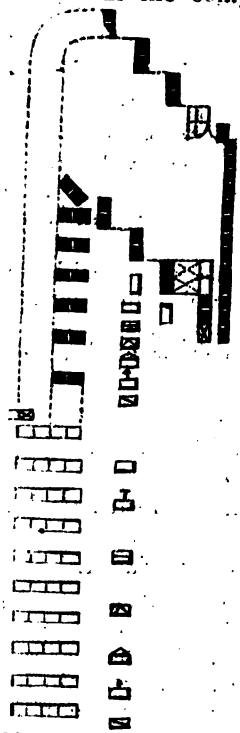


Plate 40. On the right by file into line.

166. At the command *march*, the rear-rank men doubled, will mark time; the captain and the covering sergeant will turn to the right, march straight forward, and be halted by the instructor when they shall have passed at least six paces beyond the rank of file closers; the captain will place himself correctly on the line of battle, and will direct the alignment as the men of the front rank successively arrive; the covering sergeant will place himself behind the captain at the distance of the rear rank; the two men on the right of the front rank doubled will continue to march, and passing beyond the covering sergeant and the captain, will turn to the right; after turning, they will continue to march elbow to elbow, and direct themselves toward the line of battle; but when they shall

arrive at two paces from this line, the even number will shorten the step so that the odd number may precede him on the line, the odd number placing himself by the side and on the left of the captain; the even number will afterward oblique to the left, and place himself on the left of the odd number; the next two men of the front rank doubled will pass in the same manner behind the two first, turn then to the right, and place themselves, according to the means just explained, to the left, and by the side of the two men already established on the line; the remaining files of this rank will follow in succession, and be formed to the left in the same manner. The rear rank doubled will execute the movement in the manner already explained for the front rank, taking care not to commence the movement until four men of the front rank are established on the line of battle; the rear-rank men, as they arrive on the line, will cover accurately their file leaders.

167. If the company be marching by the left flank, the instructor will cause it to form by file on the left into line of battle, according to the same principles and by the same commands, substituting the indication *left* for *right*. In this case, the odd numbers will shorten the step, so that the even numbers may precede them on the line. The captain, placed on the left of the front rank, and the left guide, will return to their places in line of battle, by order of the instructor, after the company shall be formed and aligned.

168. To enable the men the better to comprehend the mechanism of this movement, the instructor will at first cause it to be executed separately by each rank doubled, and afterward by the two ranks united and doubled.

169. The instructor will place himself on the line of battle, and without the point where the right or

left is to rest, in order to establish the base of the alignment, and afterward he will follow up the movement to assure himself that each file conforms itself to what is prescribed No. 166.

ARTICLE V.

The Company being in March by the Flank, to Form it by Company, or by Platoon, into Line, and to cause it to Face to the Right and Left in Marching.—Plate 41.

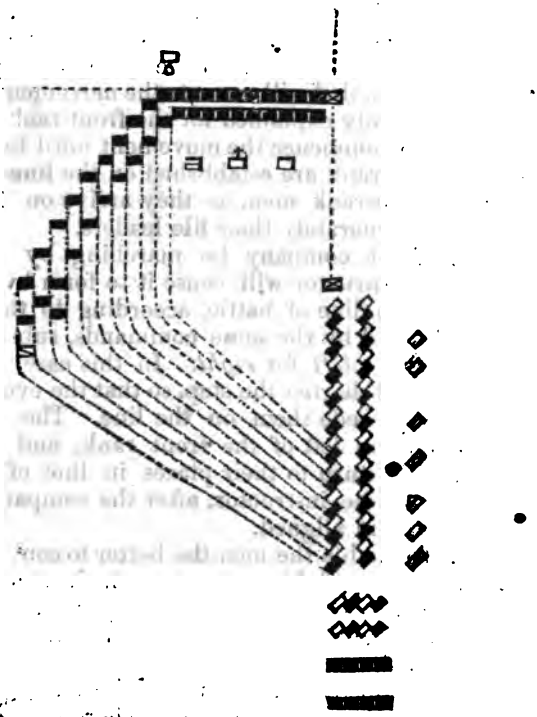


Plate 41. By company into line.

170. The company being in march by the right flank, the instructor will order the captain to form it into line; the captain will immediately command: 1. *By company, into line;* 2. MARCH.

171. At the command *march*, the covering sergeant will continue to march straight forward; the men will advance the right shoulder, take the double quick step, and move into line, by the shortest route, taking care to undouble the files, and to come on the line one after the other.

172. As the front-rank men successively arrive in line with the covering sergeant, they will take from him the step, and then turn their eyes to the front.

173. The men of the rear rank will conform to the movements of their respective file leaders, but without endeavoring to arrive in line at the same time with the latter.

174. If the company, marching either by the right or left flank, be faced about previous to forming line, the men will come into line by twos, and according to the means as above indicated, taking care to undouble files, the two front-rank men taking their places in the line at the same time, to be covered by their rear-rank men taking an oblique step.

175. At the instant the movement begins, the captain will face to his company in order to follow up the execution; and, as soon as the company is formed, he will command, *guide left*, place himself two paces before the center, face to the front, and take the step of the company.

176. At the command *guide left*, the second sergeant will promptly place himself in the front rank, on the left, to serve as guide, and the covering sergeant who is on the opposite flank will remain there.

177. When the company marches by the left

flank, this movement will be executed by the same command, and according to the same principles; the company being formed, the captain will command *guide right*, and place himself in front of his company as above; the covering sergeant who is on the right of the front rank will serve as guide, and the second sergeant placed on the left flank will remain there.

178. Thus, in a column by company, right or left in front, the covering sergeant and the second sergeant of each company will always be placed on the right and left, respectively, of the front rank; they will be denominated *right guide* and *left guide*, and the one or the other charged with the direction.

179. The company being in march by the flank, if it be the wish of the instructor to cause it to form platoons, he will give an order to that effect to the captain, who will command:

1. *By platoon, into line.* 2. MARCH.

180. The movement will be executed by each platoon according to the above principles. The captain will place himself before the center of the first platoon, and the first lieutenant before the center of the second, passing through the opening made in the center of the company if the march be by the right flank, and around the left of his platoon if the march be by the left: in this last case, the captain will also pass around the left of the second platoon, in order to place himself in front of the first. Both the captain and lieutenant, without waiting for each other, will command *guide left* (or *right*) at the instant their respective platoons are formed.

181. At the command *guide left* (or *right*), the guide of each platoon will pass rapidly to the indicated flank of the platoon, if not already there.

182. The right guide of the company will always serve as the guide of the right or left of the first platoon, and the left guide of the company will serve, in like manner, as the guide of the second platoon.

183. Thus in a column, by platoon, there will be but one guide to each platoon; he will always be placed on its left flank, if the right be in front, and on the right flank if the left be in front.

184. In these movements the file closers will follow the platoons to which they are attached.

185. The instructor may cause the company, marching by the flank, to form by company or by platoon, into line, by his own direct commands, using those prescribed for the captain, No. 170 or 179.

186. The instructor will exercise the company in passing, without a halt, from the march by the front, to the march by the flank, and reciprocally. In either case he will employ the commands prescribed in the *School of the Soldier*, substituting *company* for *squad*. The company will face to the right or left in marching, and the captain, the guides, and file closers will conform themselves to what is prescribed for each in the march by the flank, or in the march by the front of a company supposed to be a subdivision of a column.

187. If after facing to the right or left, in marching, the company find itself faced by the rear rank, the captain will place himself two paces behind the center of the front rank, now in the rear, the guides will pass to the rear rank, now leading, and the file closers will march in front of this rank.

188. The company being in march either by the front or flank, and if the instructor should wish to face it by a flank without continuing the march, it will be executed by the commands and means pre-

scribed in the *School of the Soldier*, substituting *company* for *squad*.

189. The company marching in column by platoon can be faced to the right or left, by commands, as above indicated. At the first command, the chiefs of platoons and the guides will go quickly to the indicated flank. At the command *march*, each subdivision will face, and be led off in the new direction by its chief. If the right be in front, the subdivision can be filed to the left, immediately after being faced either to the right or left, by the command *by file left* before the command *march*. If the left be in front, the command will be *by file right* before the command *march*.

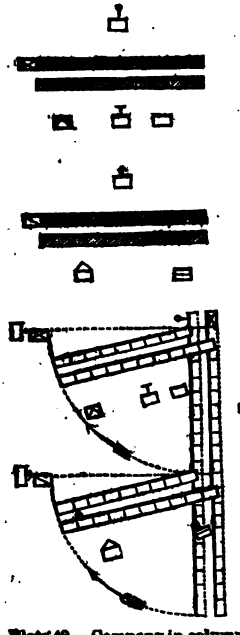


Plate 42. Company in column by platoon. By platoon right wheel.

190. The instructor, in order to avoid fatiguing the men and to prevent them from being negligent in the position of shoulder arms, will sometimes order support arms in marching by the flank, and arms on the right shoulder, when marching in line.

LESSON FIFTH.

ARTICLE I.

To Break into Column by Platoon, either at a Halt or on March.—Plate 42.

191. The company being at a halt, in line of battle, the instructor, wishing to break

it into column, by platoon to the right, will command:

1. *By platoon, right wheel.* 2. MARCH.

192. At the first command, the chiefs of platoon will rapidly place themselves two paces before the center of their respective platoons, the lieutenant passing around the left of the company. They need not occupy themselves with dressing one upon the other. The covering sergeant will replace the captain in the front rank.

193. At the command *march*, the right front-rank man of each platoon will face to the right, the covering sergeant standing fast; the chief of each platoon will move quickly by the shortest line, a little beyond the point at which the marching flank will rest when the wheel shall be completed, face to the late rear, and place himself so that the line which he forms with the man on the right (who had faced), shall be perpendicular to that occupied by the company in line of battle; each platoon will wheel according to the principles prescribed for the wheel on a fixed pivot; and when the man who conducts the marching flank shall approach near to the perpendicular, its chief will command:

1. *Platoon.* 2. HALT.

194. At the command *halt*, which will be given at the instant the man who conducts the marching flank shall have arrived at three paces from the perpendicular, the platoon will halt; the covering sergeant will move to the point where the left of the first platoon is to rest, passing by the front rank; the second sergeant will place himself, in like manner, in respect to the second platoon. Each will take care to leave between himself and the man on the right of his platoon a space equal to its front; the captain and first lieutenant will look to

this, and each take care to align the sergeant between himself and the man of the platoon who had faced to the right.

195. The guide of each platoon being thus established on the perpendicular, each chief will place himself two paces outside of his guide, and, facing toward him, will command:

3. *Left*—DRESS.

196. The alignment being ended, each chief of platoon will command, FRONT, and place himself two paces before its center.

197. The file closers will conform themselves to the movement of their respective platoons, preserving always the distance of two paces from the rear rank.

198. The company will break by platoon to the left, according to the same principles. The instructor will command:

1. *By platoon, left wheel.* 2. MARCH.

199. The first command will be executed in the same manner as if breaking by platoon to the right.

200. At the command *march*, the left front-rank man of each platoon will face to the left, and the platoons will wheel to the left, according to the principles prescribed for the wheel on a fixed pivot; the chiefs of platoon will conform to the principles indicated Nos. 193 and 194.

201. At the command *halt*, given by the chief of each platoon, the covering sergeant on the right of the front rank of the first platoon, and the second sergeant near the left of the second platoon, will each move to the points where the right of his platoon is to rest. The chief of each platoon should be careful to align the sergeant between himself

and the man of the platoon who had faced to the left, and will then command:

Right—DRESS.

202. The platoons being aligned, each chief of platoon will command, FRONT, and place himself opposite its center.

203. The instructor wishing to break the company by platoon to the right, and to move the column forward after the wheel is completed, will caution the company to that effect, and command:

1. *By platoon, right wheel.* 2. MARCH.

204. At the first command, the chiefs of platoon will move rapidly in front of their respective platoons, conforming to what has been prescribed No. 192, and will remain in this position during the continuance of the wheel. The covering sergeant will replace the chief of the first platoon in the front rank.

205. At the command *march*, the platoons will wheel to the right, conforming to the principles herein prescribed; the man on the pivot will not face to the right, but will mark time, conforming himself to the movement of the marching flank; and when the man who is on the left of this flank shall arrive near the perpendicular, the instructor will command:

3. *Forward.* 4. MARCH. 5. *Guide left.*

206. At the fourth command, which will be given at the instant the wheel is completed, the platoons will move straight to the front, all the men taking the step of twenty-eight inches. The covering sergeant and the second sergeant will move rapidly to the left of their respective platoons, the former passing before the front rank. The leading

guide will immediately take points on the ground in the direction which may be indicated to him by the instructor.

207. At the fifth command, the men will take the touch of elbows lightly to the left.

208. If the guide of the second platoon should lose his distance, or the line of direction, he will conform to the principles hereinafter prescribed, Nos. 222 and 223.

209. If the company be marching in line to the front, the instructor will cause it to break by platoon to the right by the same commands. At the command *march*, the platoons will wheel in the manner already explained; the man on the pivot will take care to mark time in his place, without advancing or receding; the instructor, the chiefs of platoon, and the guides will conform to what has been prescribed No. 204, and following.

210. The company may be broken by platoons *to* the left, according to the same principles, *and by* inverse means, the instructor giving the commands prescribed Nos. 203 and 205, substituting *left* for *right*, and reciprocally.

211. The movements explained in Nos. 203 and 209 will only be executed after the company has become well established in the principles of the march in column, Articles Second and Third.

REMARKS.

212. The instructor, placed in front of the company, will observe whether the movement be executed according to the principles prescribed above; whether the platoons, after breaking into column, are perpendicular to the line of battle just occupied; and whether the guide, who placed himself where the marching flank of his platoon had to rest, has left, between himself and the front-rank

man on the right (or left), the space necessary to contain the front of the platoon.

213. After the platoons have broken, if the rear-most guide should not accurately cover the leading one, he will not seek to correct his position till the column be put in march, unless the instructor, wishing to wheel immediately into line, should think it necessary to rectify the direction of the guides, which would be executed as will be hereinafter explained in Article V. of this Lesson.

214. The instructor will observe, that the man on the right (or left) of each platoon who, at the command *march*, faces to the right (or left) being the true pivot of the wheel, the front-rank man next to him ought to gain a little ground to the front in wheeling, so as to clear the pivot-man.

Article II.

To March in Column.

Plate 48.

215. The company having broken by platoon, right (or left) in front, the instructor, wishing to cause the column to march, will place himself twenty-five to thirty paces in front, face to the guides, establish himself correctly, on on their direction, and caution the leading guide to take points on the ground.

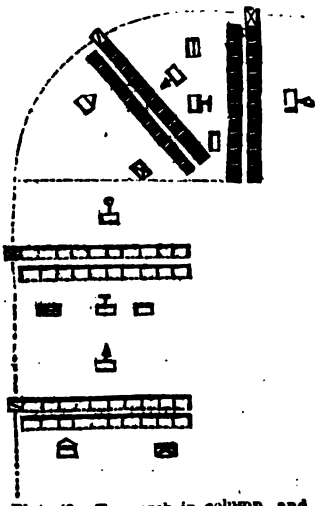


Plate 48. To march in column, and change of direction to the right.

216. The instructor being thus placed, the guide of the leading pla-

toon will take two points on the ground in the straight line passing between his own and the heels of the instructor.

217. These dispositions being made, the instructor will step aside, and command:

1. *Column, forward.* 2. *Guide left* (or *right*). 3. MARCH.

218. At the command *march*, promptly repeated by the chiefs of platoons, they, as well as the guides, will lead off, by a decided step, their respective platoons, in order that the whole may move smartly, and at the same moment.

219. The men will each feel lightly the elbow of his neighbor toward the guide, and conform himself, in marching, to the principles prescribed in the *School of the Soldier*. The man next to the guide, in each platoon, will take care never to pass him, and also to march always about six inches to the right (or left) from him, in order not to *push him* out of the direction.

220. The leading guide will observe, with the greatest precision, the length and cadence of the step, and maintain the direction of his march by the means prescribed No. 104.

221. The following guide will march exactly in the trace of the leading one, preserving between the latter and himself a distance precisely equal to the front of his platoon, and marching in the same step with the leading guide.

222. If the following guide lose his distance from the one leading (which can only happen by his own fault), he will correct himself by slightly lengthening or shortening a few steps, in order that there may not be sudden quickenings or slackenings in the march of his platoon.

223. If the same guide, having neglected to march

exactly in the trace of the preceding one, find himself sensibly out of the direction, he will remedy this fault by advancing more or less the shoulder opposite to the true direction, and thus, in a few steps, insensibly regain it, without the inconvenience of the oblique step, which would cause a loss of distance. In all cases, each chief of platoon will cause it to conform to the movements of its guide.

REMARKS ON THE MARCH IN COLUMN.

224. If the chiefs and guides of subdivisions neglect to lead off, and to decide the march from the first step, the march will be begun in uncertainty, which will cause waverings, a loss of step, and a loss of distance.

225. If the leading guide take unequal steps, the march of his subdivision, and that which follows, will be uncertain; there will be undulations, quickenings, and slackenings in the march.

226. If the same guide be not habituated to prolong a given direction, without deviation, he will describe a crooked line, and the column must wind to conform itself to such line.

227. If the following guide be not habituated to march in the trace of the preceding one, he will lose his distance at every moment in endeavors to regain the trace, the preservation of which is the most important principle in the march in column.

228. The guide of each subdivision in column will be responsible for the direction, distance, and step; the chief of the subdivision, for the order and conformity of his subdivision with the movements of the guide. Accordingly, the chief will frequently turn, in the march, to observe his subdivision.

229. The instructor, placed on the flank of the

guides, will watch over the execution of all the principles prescribed; he will, also, sometimes place himself in the rear, align himself on the guides, and halt, pending some thirty paces together, to verify the accuracy of the guides.

230. In column, chiefs of subdivisions will always repeat, with the greatest promptitude, the commands *march* and *halt*, no chief waiting for another, but each repeating the command the moment he catches it from the instructor. They will repeat no other command given by him; but will explain, if necessary, to their subdivisions, in an under tone of voice, what they will have to execute, as indicated by the commands of caution.

Article III.

To Change Direction.—Plate 43.

231. The changes of direction of a column while marching will be executed according to the principles prescribed for wheeling on the march. Whenever, therefore, a column is to change direction, the instructor will change the guide, if not already there, to the flank opposite the side to which the change is to be made.

232. The column being in march right in front, if it be the wish of the instructor to change direction to the right, he will give the order to the chief of the first platoon, and immediately go himself, or send a marker to the point at which the change of direction is to be made; the instructor, or marker, will place himself on the direction of the guides, so as to present the breast to that flank of the column.

233. The leading guide will direct his march on that person, so that, in passing, his left arm may just graze his breast. When the leading guide

shall have approached near to the marker, the chief of his platoon will command:

1. *Right wheel.* 2. MARCH.

234. The first command will be given when the platoon is at the distance of four paces from the marker.

235. At the command *march*, which will be pronounced at the instant the guide shall have arrived opposite the marker, the platoon will wheel to the right, conforming to what is prescribed in the *School of the Soldier.*

236. The wheel being finished, the chief of each platoon will command:

3. *Forward.* 4. MARCH.

237. These commands will be pronounced and executed as is prescribed in the *School of the Soldier.* The guide of the first platoon will take points on the ground in the new direction, in order the better to regulate the march.

238. The second platoon will continue to march straight forward till up with the marker, when it will wheel to the right, and retake the direct march by the same commands and the same means which governed the first platoon.

239. The column being in march right in front, if the instructor should wish to change direction to the left, he will command, *guide right.* At this command the two guides will move rapidly to the right of their respective platoons, each passing in front of his subdivision; the men will take the touch of elbows to the right; the instructor will afterwards conform to what is prescribed, 232.

240. The change of direction to the left will then be executed according to the same principles as the

change of direction to the right, but by inverse means.

241. When the change of direction is completed, the instructor will command, *guide left.*

242. The changes of direction in a column, left in front, will be executed according to the same principles.

243. In changes of direction in double quick time, the platoon will wheel according to the principles prescribed in the *School of the Soldier.*

244. In order to prepare the men for those formations in line, which can be executed only by turning to the right or the left, the instructor will sometimes cause the column to change direction to the side of the guide. In this case, the chief of the leading platoon will command: *Left* (or *right*) *turn*, instead of *left* (or *right*) *wheel.* The subdivisions will each turn, in succession, conforming to what is prescribed in the *School of the Soldier.* The leading guide, as soon as he has turned, will take points *on* the ground, the better to regulate the direction of the march.

245. It is highly important, in order to preserve distances and the direction, that all the subdivisions of the column should change direction precisely at the point where the leading subdivision changed; it is for this reason that that point ought to be marked in advance, and that it is prescribed that the guides direct their march on the marker, also that each chief of subdivision shall not cause the change to commence till the guide of his subdivision has grazed the breast of this marker.

246. Each chief will take care that his subdivision arrives at the point of change in a square with the line of direction: with this view, he will face to his subdivision when the one which precedes has commenced to turn or to wheel, and he will be

watchful that it continues to march squarely until it arrives at the point where the change of direction is to commence.

247. If, in changes of direction, the pivot of the subdivision which wheels should not clear the wheeling point, the next subdivision would be arrested and distances lost; for the guide who conducts the marching flank having to describe an arc, in length about once and a half the front of the subdivision, the second subdivision would be already up with the wheeling point, while the first which wheels has yet the half of its front to execute, and hence would be obliged to mark time until that half be executed. It is therefore prescribed, that the pivot of each subdivision should take steps of nine or eleven inches in length, according to the swiftness of the gait, in order not to arrest the march of the next subdivision. The chiefs of subdivision will look well to the step of the pivot, and cause his step to be lengthened or shortened as may be judged necessary. By the nature of this movement, the center of each subdivision will bend a little to the rear.

248. The guides will never alter the length or the cadence of the step, whether the change of direction be to the side of the guide or to the opposite side.

249. The marker, placed at the wheeling point, will always present his breast to the flank of the column. The instructor will take the greatest pains in causing the prescribed principles to be observed; he will see that each subdivision only commences the change of direction when the guide, grazing the breast of the marker, has nearly passed him, and, that the marching flank does not describe the arc of too large a circle, in order that it may not be thrown beyond the new direction.

250. In change of direction by wheel, the guide of the wheeling flank will cast his eyes over the ground at the moment of commencing the wheel, and will describe an arc of a circle whose radius is equal to the front of the subdivision.

Article IV.

To Halt the Column.

251. The column being in march, when the instructor shall wish to halt it, he will command:

1. *Column.* 2. Halt.

252. At the second command, promptly repeated by the chiefs of platoon, the column will halt; the guides also will stand fast, although they may have lost both distance and direction.

253. If the command *halt* be not repeated with the greatest vivacity, and executed at the same instant, distances will be lost.

254. If a guide, having lost his distance, seek to recover it after that command, he will only throw his fault on the following guide, who, if he have marched well, will no longer be at his proper distance; and if the latter regain what he has thus lost, the movement will be propagated to the rear of the column.

Article V.

Being in Column by Platoon, to form to the Right or Left into Line of Battle, either at a Halt or on the March.—Plate 44.

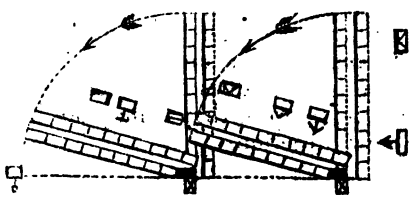


Plate 44. Left into line wheel.

255. The instructor having halted the column, right in front, and wishing to form it into line of battle, will place himself at platoon distance in front of the leading guide, face to him, and rectify, if necessary, the position of the guide beyond; which being executed, he will command:

Left—DRESS.

256. At this command, which will not be repeated by the chiefs of platoon, each of them will place himself briskly two paces outside of his guide, and direct the alignment of the platoon perpendicular to the direction of the column.

257. Each chief having aligned his platoon, will command FRONT, and return quickly to his place in column.

258. This disposition being made, the instructor will command:

1. *Left into line, wheel.* 2. MARCH.

259. At the command *march*, briskly repeated by the chiefs of platoon, the front-rank man on the left of each platoon will face to the left, and place his breast lightly against the arm of the guide by his side, who stands fast; the platoons will wheel to the left on the principle of wheels from a halt, and in conformity to what is prescribed No. 214. Each chief will turn to his platoon to observe its movement, and when the marching flank has approached near the line of battle, he will command:

1. *Platoon.* 2. HALT.

260. The command *halt* will be given when the marching flank of the platoon is three paces from the line of battle.

261. The chief of the second platoon, having halted it, will return to his place as a file closer, passing around the left of his subdivision.

262. The captain having halted the first platoon, will move rapidly to the point at which the right of the company will rest in line of battle, and command:

Right—DRESS.

263. At this command the two platoons will dress up on the alignment; the front-rank man on the right of the leading platoon, who finds himself opposite the instructor established on the direction of the guides, will place his breast lightly against the left arm of this officer. The captain will direct the alignment from the right on the man on the opposite flank of the company.

264. The company being aligned, the captain will command:

FRONT.

265. The instructor seeing the company in line of battle, will command:

Guides—POSTS.

266. At this command the covering sergeant will cover the captain, and the left guide will return to his place as a file closer.

267. If the column be left in front, and the instructor should wish to form it to the right into line of battle, he will place himself at platoon distance in front of the leading guide, face to him, and rectify, if necessary, the position of the guide beyond; which being executed, he will command:

1. *Right into line, wheel.* 2. MARCH.

268. At the command *march*, the front-rank man on the right of each platoon will face to the right and place his breast lightly against the left arm of the guide by his side, who stands fast; each platoon will wheel to the right, and will be halted by its chief, when the marching flank has approached near

the line of battle; for this purpose the chief of each platoon will command:

1. *Platoon.* 2. HALT.

269. The command *halt*, will be given when the marching flank of the platoon is three paces from the line of battle. The chief of the second platoon having halted his platoon, will resume his place in the rank of file closers.

270. The captain having halted the first platoon, will move briskly to the point at which the left of the company will rest, and command:

Left—DRESS.

271. At this command, the two platoons will dress up on the alignment; the man on the left of the second platoon, opposite the instructor, will place his breast lightly against the right arm of this officer, and the captain will direct the alignment from the left on the man on the opposite flank of the company.

272. The company being aligned, the captain will command:

FRONT.

273. The instructor will afterward command:

Guides—POSTS.

274. At this command, the captain will move to the right of his company, the covering sergeant will cover him, and the left guide will return to his place as a file closer.

275. The instructor may omit the command *left* or *right dress*, previous to commanding *left* or *right into line*, *wheel*, unless after rectifying the position of the guides, it should become necessary to dress the platoons, or one of them, laterally to the right or left.

276. The instructor, before the command *left* (or *right*) *into line*, *wheel*, will assure himself that the rearmost platoon is at its exact wheeling distance from the one in front. This attention is important, in order to detect negligence on the part of guides in this essential point.

277. If the column be marching right in front, and the instructor should wish to form it into line without halting the column, he will give the commands prescribed No. 258, and move rapidly to platoon distance in front of the leading guide.

278. At the command *march*, briskly repeated by the chiefs of platoon, the left guides will halt short, the instructor, the chiefs of platoon and the platoons, will conform to what is prescribed No. 259 and following.

279. If the column be in march left in front, this formation will be made according to the same principles, and by inverse means.

280. If the column be marching right in front, and the instructor should wish to form it into line without halting the column, and to march the company in line to the front, he will command:

1. *By platoons left wheel.* 2. MARCH.

281. At the command *march*, briskly repeated by the chiefs of platoon, the left guides will halt: the man next to the left guide in each platoon will mark time: the platoons will wheel to the left, conforming to the principles of the wheel on a fixed pivot. When the right of the platoons shall arrive near the line of battle, the instructor will command:

3. *Forward.* 4. MARCH. 5. *Guides right* (or *left*).

282. At the fourth command, given at the instant the wheel is completed, all the men of the company will move off together with the step of twenty-eight

inches; the captain, the chief of the second platoon, the covering sergeant, and the left guide will take their positions as in line of battle.

283. At the fifth command, which will be given immediately after the fourth, the captain and covering sergeant, if not already there, will move briskly to the side on which the guide is designated. The non-commissioned officer charged with the direction will move rapidly in front of the guide, and will be assured in his line of march by the instructor, as is prescribed No. 119. That non-commissioned officer will immediately take points on the ground as indicated in the same number. The men will take the touch of elbows to the side of the guide, conforming themselves to the principles of the march in line.

284. The same principles are applicable to a column left in front.

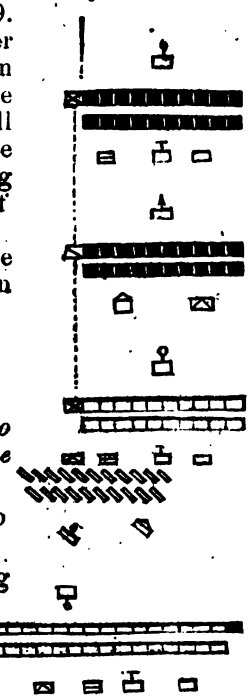
LESSON SIXTH.

ARTICLE I.

To Break the Company into Platoons, and to Re-form the Company.—Plate 45.

TO BREAK THE COMPANY INTO PLATOONS.

285. The company marching in the cadenced step, and supposed to make part of a column, right in front, when the instructor shall wish to



To break into platoons. Plate 45.

cause it to break by platoon, he will give the order to the captain, who will command: 1. *Break into platoons*, and immediately place himself before the center of the first platoon.

286. At the command *break into platoons*, the first lieutenant will pass quickly around the left to the center of his platoon, and give the caution: *Mark time.*

287. The captain will then command: 2. MARCH.

288. The first platoon will continue to march straight forward; the covering sergeant will move rapidly to the left flank of this platoon (passing by the front rank) as soon as the flank shall be disengaged.

289. At the command *march*, given by the captain, the second platoon will begin to mark time; its chief will immediately add: 1. *Right oblique;* 2. MARCH. The last command will be given so that this platoon may commence obliquing the instant the rear rank of the first platoon shall have passed. The men will shorten the step in obliquing, so that when the command *forward march* is given, the platoon may have its exact distance.

290. The guide of the second platoon being near the direction of the guide of the first, the chief of the second will command *Forward* and add MARCH, the instant that the guide of his platoon shall cover the guide of the first.

291. In a column, left in front, the company will break into platoons by inverse means, applying to the first platoon all that has been prescribed for the second, and reciprocally.

292. In this case, the left guide of the company will shift to the right flank of the second platoon, and the covering sergeant will remain on the right of the first.

TO RE-FORM THE COMPANY.

293. The column, by platoon, being in march, right in front, when the instructor shall wish to cause it to form company, he will give the order to the captain, who will command: *Form company.*

294. Having given this command, the captain will immediately add: 1. *First platoon;* 2. *Right oblique.*

295. The chief of the second platoon will caution it to continue to march straight forward.

296. The captain will then command: 3. MARCH.

297. At this command, repeated by the chief of the second, the first platoon will oblique to the right, in order to unmask the second; the covering sergeant, on the left of the first platoon, will return to the right of the company, passing by the front rank.

298. When the first platoon shall have nearly unmasked the second, the captain will command: 1. *Mark time,* and at the instant the unmasking shall be complete, he will add: 2. MARCH. The first platoon will then cease to oblique, and mark time.

299. In the mean time the second platoon will have continued to march straight forward, and when it shall be nearly up with the first, the captain will command *Forward,* and at the instant the two platoons shall unite, add MARCH; the first platoon will then cease to mark time.

300. In a column, left in front, the same movement will be executed by inverse means, the chief of the second platoon giving the command *Forward,* and the captain adding the command MARCH, when the platoons are united.

301. The guide of the second platoon, on its right, will pass to its left flank the moment the platoon

begins to oblique; the guide of the first, on its right, remaining on that flank of the platoon.

302. The instructor will also sometimes cause the company to break and re-form, by platoon, by his own direct commands. In this case, he will give the general commands prescribed for the captain above: 1. *Break into platoons;* 2. MARCH; and 1. *Form company;* 2. MARCH.

303. If, in breaking the company into platoons, the subdivision that breaks off should mark time too long, it might, in a column of many subdivisions, arrest the march of the following one, which would cause a lengthening of the column and a loss of distances.

304. In breaking into platoons, it is necessary that the platoons which oblique should not shorten the step too much, in order not to lose distance in column, and not to arrest the march of the following subdivision.

305. If a platoon obliques too far to a flank, it would be obliged to oblique again to the opposite flank to regain the direction, and by the double movement arrest probably the march of the following subdivision.

306. The chiefs of those platoons which oblique will face to their platoons, in order to enforce the observance of the foregoing principles.

307. When, in a column of several companies, they break in succession, it is of the greatest importance that each company should continue to march in the same step, without shortening or slackening, while that which precedes breaks, although the following company should close up on the preceding one. This attention is essential to guard against an elongation of the column.

308. Faults of but little moment, in a column of a few companies, would be serious inconveniences

in a general column of many battalions. Hence the instructor will give the greatest care in causing all the prescribed principles to be strictly observed. To this end, he will hold himself on the directing flank, the better to observe all the movements.

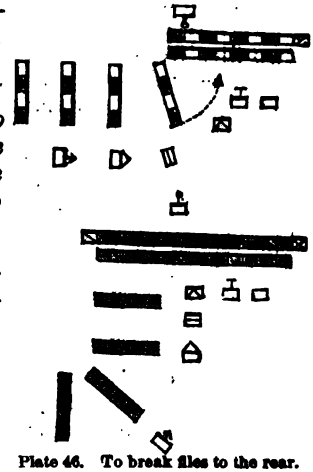


Plate 46. To break files to the rear.

Article II.

Being in Column, to Break Files to the Rear, and to cause them to re-enter into Line.—Plate 46.

309. The company being in march, and supposed to constitute a subdivision of a column right (or left) in front, when the instructor shall wish to cause files to break off, he will give the order to the captain, who will immediately turn to his company, and command:

1. *Two files from left* (or *right*) *to rear.* 2. March.

310. At the command *march*, the two files on the left (or right) of the company will face to the right (or left) and double, the others will continue to march straight forward. If the files are broken from the left, the men will immediately file to the left, so that the odd numbers will cover the first and third, and the even numbers, the second and fourth files, from that flank of the company. If the files are broken from the right, the men will immediately file to the right so that the even numbers will cover the first and third, and the odd numbers,

the second and fourth files, from that flank of the company. The men will be careful not to lose their distances, and to keep aligned.

311. If the instructor should still wish to break two files from the same side, he will give the order to the captain, who will proceed as above directed.

312. At the command *march*, given by the captain, the files already broken, advancing a little the outer shoulder, will gain the space of two files to the right, if the files are broken from the left, and to the left, if the files are broken from the right, shortening at the same time the step, in order to make room between themselves and the rear rank of the company for the files last ordered to the rear; the latter will break by the same commands, and in the same manner as the first. The men who double should increase the length of the step, in order to prevent distances from being lost.

313. The instructor may thus diminish the front of a company by breaking off successive groups of two files, but the new files must always be broken from the same side.

314. The instructor, wishing to cause files broken off to return into line, will give the order to the captain, who will immediately command:

1. *Two files into line.* 2. MARCH.

315. At the command *march*, the first two files of those marching by the flank will return briskly into line, and the others will gain the space of two files by advancing the inner shoulder toward the flank to which they belong.

316. The captain will turn to his company to watch the observance of the principles which have just been prescribed.

317. The instructor having caused groups of two files to break one after another, and to return again

into line, will afterward cause two or three groups to break together, and for this purpose will command: *Four or six files from left* (or *right*) *to rear*; MARCH. The files designated will face to the right (or *left*) and double, and will then immediately file into their proper places as indicated No. 310, taking care that the distances are preserved.

318. The instructor will next order the captain to cause two or three groups to be brought into line at once, who, turning to the company, will command:

Four or six files into line—MARCH.

319. At the command *march*, the files designated will advance the inner shoulder, move up and form on the flank of the company by the shortest lines.

320. As often as files shall break off to the rear, the guide on that flank will gradually close on the nearest front-rank man remaining in line, and he will also open out to make room for files ordered into line.

321. The files which march in the rear are disposed in the following order: the left files as if the company was marching by the right flank, and the right files as if the company was marching by the left flank. Consequently, whenever there is on the right or left of a subdivision a file which does not belong to a group, it will be broken singly.

322. It is necessary to the preservation of distances in column, that the men should be habituated in the schools of detail to execute the movements of this article with precision.

323. If the new files broken to the rear do not step well off when filing to the left or right; if, when files are ordered into line, they do not move up with promptitude and precision, in either case

the following files will be arrested in their march, and thereby cause the column to be lengthened out.

324. The instructor will place himself on the flank from which the files are broken, to assure himself of the exact observance of the principles.

325. Files will only be broken off from the side of direction, in order that the whole company may easily pass from the front to the flank march.

ARTICLE III.

To March the Column in Route and to Execute the Movements incident thereto.

326. The swiftness of the route step will be one hundred and ten steps in a minute; this swiftness will be habitually maintained in columns in route, when the roads and ground may permit.

327. The company being at a halt, and supposed to constitute a subdivision of a column, when the instructor shall wish to cause it to march in the route step, he will command:

1. *Column, forward.* 2. *Guide, left* (or *right*). 3. *Route step.* 4. MARCH.

328. At the command *march*, repeated by the captain, the two ranks will step off together; the rear rank will take in marching, by shortening a few steps, a distance of one pace (twenty-eight inches) from the rank preceding, which distance will be computed from the breasts of the men in the rear rank to the knapsacks of the men in the front rank. The men, without further command, will immediately carry their arms *at will*, as indicated in the *School of the Soldier*, or they may sling them on their backs muzzle up. They will no longer be required to march in the cadence pace, or with the same foot, or to remain silent. The files will march

at ease; but care will be taken to prevent the ranks from intermixing, the front rank from getting in advance of the guide, and the rear rank from opening to too great a distance.

329. The company marching in the route step, the instructor will cause it to change direction, which will be executed without formal commands, on a simple caution from the captain; the rear rank will come up to change direction in the same manner as the front rank. Each rank will conform itself, although in the route step, to the principles which have been prescribed for the change in closed ranks, with this difference only, that the pivot man, instead of taking steps of nine, will take steps of fourteen inches, in order to clear the wheeling point.

330. The company marching in the route step, to cause it to pass to the cadence step, the instructor will first order pieces to be brought to the right shoulder, and then command:

1. *Quick time.* 2. MARCH.

331. At the command *march*, the men will resume the cadenced step, and will close so as to leave a distance of sixteen inches between each rank.

332. The company marching in the cadenced pace, the instructor, to cause it to take the route step, will command:

1. *Route step.* 2. MARCH.

333. At the command *march*, the front rank will continue the step of twenty-eight inches, the rear rank will take, by gradually shortening the step, the distance of twenty-eight inches from the front rank; the men will carry their arms at will.

334. If the company be marching in the route step, and the instructor should suppose the neces-

sity of marching by the flank in the same direction, he will command:

1. *Company by the right* (or *left*) *flank.* 2. *By file left* (or *right*). 3. MARCH.

335. At the command *march*, the company will face to the right (or left) in marching, the captain will place himself by the side of the guide who conducts the leading flank; this guide will wheel immediately to the left or right; all the files will come in succession to wheel on the same spot as the guide; if there be files broken off to the rear, they will, by wheeling, regain their respective places, and follow the movement of the company.

336. The instructor having caused the company to be again formed into line, will exercise it in increasing and diminishing front, by platoon, which will be executed by the same commands, and the same means, as if the company were marching in the cadenced step. When the company breaks into platoons, the chief of each will move to the flank of his platoon, and will take the place of the guide, who will step back into the rear rank.

337. The company being in column, by platoon, and supposed to march in the route step, the instructor can cause the front to be diminished and increased, by section, if the platoons have a front of twelve files or more.

338. The movements of diminishing and increasing front, by section, will be executed according to the principles indicated for the same movements by platoon. The right sections of platoons will be commanded by the captain and first lieutenant, respectively; the left sections, by the two next subalterns in rank, or, in their absence, by sergeants.

339. The instructor wishing to diminish by sec-

tion, will give the order to the captain, who will command:

1. *Break into sections.* 2. MARCH.

340. As soon as the platoons shall be broken, each chief of section will place himself on its directing flank in the front rank, the guides, who will be thus displaced, will fall back into the rear rank: the file closers will close up to within one pace of this rank.

341. Platoons will be broken into sections only in the column in route, the movement will never be executed in the maneuvers, whatever may be the front of the company.

342. When the instructor shall wish to re-form platoons, he will give the order to the captain, who will command:

1. *Form platoons.* 2. MARCH.

343. At the first command, each chief of section will place himself before its center, and the guides will pass into the front rank. At the command *march*, the movement will be executed as has been prescribed for forming company. The moment the platoons are formed, the chiefs of the left sections will return to their places as file closers.

344. The instructor will also cause to be executed the diminishing and increasing front by files, as prescribed in the preceding article, and in the same manner, as if marching in the cadenced step. When the company is broken into sections, the subdivisions must not be reduced to a front of less than six files, not counting the chief of the section.

345. The company being broken by platoon, or by section, the instructor will cause it, marching in the route step, to march by the flank in the same direction, by the commands and the means indicat-

ed, Nos. 334 and 335. The moment the subdivisions shall face to the right (or left), the first file of each will wheel to the left (or right), in marching, to prolong the direction, and to unite with the rear file of the subdivision immediately preceding. The file closers will take their habitual places in the march by the flank, before the union of the subdivisions.

346. If the company be marching by the right flank, and the instructor should wish to undouble the files, which might sometimes be found necessary, he will inform the captain, who, after causing the cadenced step to be resumed, and arms to be shouldered or supported, will command:

1. *In two ranks, undouble files.* 2. MARCH.

347. At the second command, the odd numbers will continue to march straight forward, the even numbers will shorten the step, and obliquing to the left, will place themselves promptly behind the *odd* numbers: the rear rank will gain a step to the left so as to retake the touch of elbows on the side of the front rank.

348. If the company be marching by the left flank, it will be the even numbers who will continue to march forward, and the odd numbers who will undouble.

349. If it be found necessary, from the narrowness of the way or other cause, to reduce the front still further, the captain, on an intimation from the instructor, will command:

1. *In one rank, undouble files.* 2. MARCH.

350. At the command *march*, the right or left guide, with the leading front-rank man, will continue the march, the rear-rank man stepping in rear of his file leader as soon as he is able to pass; the

other files marking time. The second file, and successively all the other files, will step off as soon as sufficient distance is gained, the front-rank man of each file following immediately the rear-rank man of the file next in front of him, and each rear-rank man taking his place as above indicated.

351. If the instructor wishes to double files, he will so indicate to the captain, who will command:

1. *In two ranks, double files.* 2. MARCH.

352. At the command *march*, the rear-rank men will take a side step to the right (or left), and each rank will close up on its leading file.

353. If the instructor should wish again to double the files, he will give the order to the captain, who will command:

1. *In four ranks, double files.* 2. MARCH.

354. At the command *march*, the files will double in the manner as explained, when the company faces by the right or the left flank. The instructor will afterward cause the route step to be resumed.

355. The various movements prescribed in this lesson may be executed in double quick time. The men will be brought, by degrees, to pass over at this gait about eleven hundred yards in seven minutes.

356. When the company marching in the route step shall halt, the rear rank will close up at the command *halt*, and the whole will shoulder arms.

357. Marching in the route step, the men will be permitted to carry their pieces in the manner they shall find most convenient, paying attention only to holding the muzzles up, so as to avoid accidents.

ARTICLE IV.

Countermarch.—Plate 47.

358. The company being at a halt, and supposed to constitute part of a column, right in front, when the instructor shall wish to cause it to countermarch, he will command:

1. *Countermarch.* 2. *Company, right*—FACE. 3. *By file left.* 4. MARCH.

359. At the second command, the company will face to the right, the two guides to the right about;

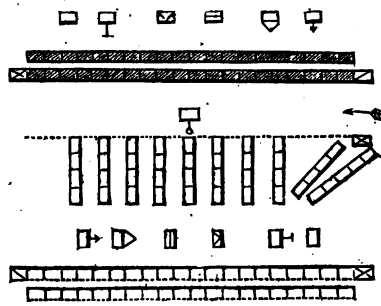


Plate 47. The countermarch.

the captain will go to the right of his company and cause two files to break to the rear, and then place himself by the side of the front-rank man, to conduct him.

360. At the command *march*, both guides will stand fast; the company will step off smartly; the first file, conducted by the captain, will wheel around the right guide, and direct its march along the front rank so as to arrive behind, and two paces from the left guide; each file will come in succession to wheel on the same ground around the right guide; the leading file having arrived at a

point opposite to the left guide, the captain will command:

1. *Company.* 2. HALT. 3. FRONT. 4. *Right*—DRESS.

361. The first command will be given at *four* paces from the point where the leading file is to rest.

362. At the second command, the company will halt.

363. At the third, it will face to the front.

364. At the fourth, the company will dress by the right; the captain will step two paces outside of the left guide, now on the right, and direct the alignment so that the front rank may be inclosed between the two guides; the company being aligned, he will command FRONT, and place himself before the center of the company as if in column; the guides, passing along the front rank, will shift to their proper places on the right and left of that rank.

365. In a column, by platoon, the countermarch will be executed by the same commands, and according to the same principles; the guide of each platoon will face about, and its chief will place himself by the side of the file on the right, to conduct it.

366. In a column, left in front, the countermarch will be executed by inverse commands and means, but according to the same principles. Thus, the movement will be made by the right flank of subdivisions, if the right be in front, and by the left flank, if the left be in front; in both cases the subdivisions will wheel by file to the side of the front rank.

Article V.

Being in Column by Platoon, to Form on the Right (or Left) into Line of Battle.—Plate 48.

367. The column by platoon, right in front, being in march, the instructor, wishing to form it on the right into line of battle, will command:

1. *On the right into line.* 2. *Guide right.*

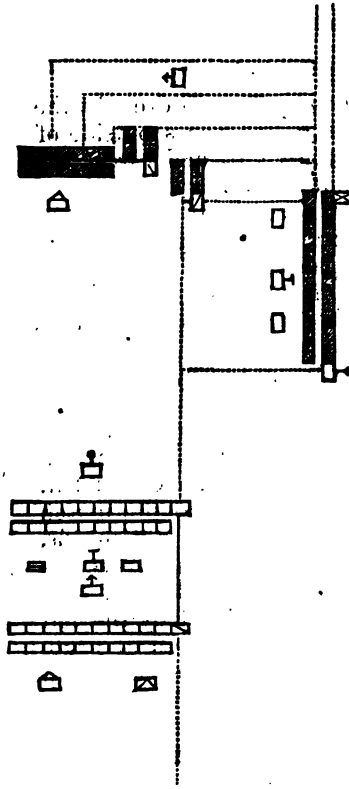


Plate 48. On the right into line. Guide right.

368. At the second command, the guide of each platoon will shift quickly to its right flank, and the men will touch elbows to the right; the column will continue to march straight forward.

369. The instructor having given the second command, will move briskly to the point at which the right of the company ought to rest in line, and place himself facing the point of direction to the left, which he will choose.

370. The line of battle ought to be so chosen that the guide of each

platoon, after having turned to the right, may have, at least, ten paces to take before arriving upon that line.

371. The head of the column being nearly opposite to the instructor, the chief of the first platoon will command: 1. *Right turn;* and when exactly opposite to that point, he will add:

2. MARCH.

372. At the command *march*, the first platoon will turn to the right, in conformity with the principles prescribed in the *School of the Soldier*. Its guide will so direct his march as to bring the front-rank man, next on his left, opposite to the instructor; the chief of the platoon will march before its center; and when its guide shall be near the line of battle, he will command:

1. *Platoon.* 2. HALT.

373. At the command *halt*, which will be given at the instant the right of the platoon shall arrive at the distance of three paces from the line of battle, the platoon will halt; the files, not yet in line, will come up promptly. The guide will throw himself on the line of battle, opposite to one of the three left files of his platoon; he will face to the instructor, who will align him on the point of direction to the left. The chief of platoon having, at the same time, gone to the point where the right of the company is to rest, will, as soon as he sees all the files of the platoon in line, command:

Right—DRESS.

374. At this, the first platoon will align itself; the front-rank man, who finds himself opposite to the guide, will rest his breast lightly against the right arm of this guide, and the chief of the platoon,

from the right, will direct the alignment on this man.

375. The second platoon will continue to march straight forward, until its guide shall arrive opposite to the left file of the first; it will then turn to the right at the command of its chief, and march toward the line of battle, its guide directing himself on the left file of the first platoon.

376. The guide having arrived at the distance of three paces from the line of battle, this platoon will be halted, as prescribed for the first; at the instant it halts, its guide will spring on the line of battle, opposite to one of the three left files of his platoon, and will be assured in his position by the instructor.

377. The chief of the second platoon, seeing all its files in line, and its guide established on the direction, will command:

Right—DRESS.

378. Having given this command, he will return to his place as a file closer, passing around the *left;* the second platoon will dress up on the alignment of the first, and, when established, the captain will command:

FRONT.

379. The movement ended, the instructor will command:

Guides—POSTS.

380. At this command, the two guides will return to their places in line of battle.

381. A column, by platoon, left in front, will form on the left into line of battle, according to the same principles, and, by inverse means, applying to the second platoon what is prescribed for the first, and reciprocally. The chief of the second platoon having aligned it, from the point of *appui* (the left),

will retire to his place as a file closer. The captain having halted the first platoon three paces behind the line of battle, will go to the same point to align this platoon, and then command: FRONT. At the command, *guides—posts*, given by the instructor, the captain will shift to his proper flank, and the guides take their places in line of battle.

382. When the companies of a regiment are to be exercised at the same time in the school of the company, the colonel will indicate the lesson or lessons they are severally to execute. The whole will commence by a bugle signal, and terminate in like manner.

Formation of a Company from two Ranks into single Ranks, and reciprocally.

383. The company being formed into two ranks in the manner indicated in the *School of the Soldier*, and supposed to make part of a column, right or left in front, when the instructor shall wish to form it into single rank, he will command:

1. *In one rank, form company.* 2. MARCH.

384. At the first command, the right guide will face to the right.

385. At the command *march*, the right guide will step off and march in the prolongation of the front rank.

386. The first file will step off at the same time with the guide; the front-rank man will turn to the right at the first step, follow the guide, and be himself followed by the rear-rank man of his file, who will come to turn on the same spot where he had turned. The second file, and successively all the other files, will step off as has been prescribed for the first, the front-rank man of each file following immediately the rear-rank man of the file next on

his right. The captain will superintend the movement, and when the last man shall have stepped off, he will halt the company, and face it to the front.

387. The file closers will take their places in line of battle, two paces in rear of the rank.

388. The company being in single rank, when the instructor shall wish to form it into two ranks, he will command:

1. *In two ranks, form company.* 2. *Company right*—FACE. 3. MARCH.

389. At the second command, the company will face to the right: the right guide and the man on the right will remain faced to the front.

390. At the command *march*, the men who have faced to the right will step off and form files in the following manner: the second man in the rank will place himself behind the first to form the first file; the third will place himself by the side of the first in the front rank; the fourth behind the third in the rear rank. All the others will, in like manner, place themselves, alternately, in the front and rear rank, and will thus form files of two men on the left of those already formed.

391. The formations above described will be habitually executed by the right of companies; but when the instructor shall wish to have them executed by the left, he will face the company *about*, and post the guides in the rear rank.

392. The formation will then be executed by the same commands, and according to the same principles as by the front rank; the movement commencing with the left file, now become the right, and in each file by the rear-rank man, now become the front; the left guide will conform to what has been prescribed for the right.

393. The formation ended, the instructor will face the company to its proper front.

394. When a battalion in line has to execute either of the formations above described, the colonel will cause it to break to the rear by the right or left of companies, and will then give the commands just prescribed for the instructor. Each company will execute the movement as if acting singly.

Formation of a Company from two Ranks into four, and reciprocally, at a Halt, and in March.

395. The company being formed in two ranks, at a halt, and supposed to form part of a column right in front, when the instructor shall wish to form it into four ranks, he will command:

1. *In four ranks, form company.* 2. *Company left*—FACE. 3. MARCH (or *double quick*—MARCH).

396. At the second command, the left guide will remain faced to the front, the company will face to the left; the rear rank will gain the distance of one pace from the front rank by a side step to the left and rear, and the men will form into four ranks as prescribed in the *School of the Soldier.*

397. At the command *march*, the first file of four men will re-face to the front without undoubling. All the other files of four will step off, and closing successively to about five inches of the preceding file, will halt, and immediately face to the front, the men remaining doubled.

398. The file closers will take their new places in line of battle, at two paces in rear of the fourth rank.

399. The captain will superintend the movement.

400. The company being in four ranks, when the instructor shall wish to form it into two ranks, he will command:

1. *In two ranks, form company.* 2. *Company right.* —FACE. 3. MARCH (or *double quick*—MARCH).

401. At the second command, the left guide will stand fast, the company will face to the right.

402. At the command *march*, the right guide will step off and march in prolongation of the front rank. The leading file of four men will step off at the same time, the other files standing fast; the second file will step off when there shall be between it and the first space sufficient to form into two ranks. The following files will execute successively what has been prescribed for the second. As soon as the last file shall have its distance, the instructor will command:

1. *Company.* 2. HALT. 3. FRONT.

403. At the command *front*, the company will face to the front, and the files will undouble.

404. The company being formed in two ranks, and marching to the front, when the instructor shall wish to form it into four ranks, he will command:

1. *In four ranks, form company.* 2. *By the left, double files.* 3. MARCH (or *double quick*—MARCH).

405. At the command *march*, the left guide and the left file of the company will continue to march straight to the front; the company will make a half face to the left, the odd numbers placing themselves behind the even numbers. The even numbers of the rear rank will shorten their steps a little, to permit the odd numbers of the front rank to get between them and the even numbers of that rank. The files thus formed of fours, except the left file, will continue to march obliquely, lengthening their steps slightly, so as to keep constantly abreast of the guide: each file will close successively on the file next on its left, and when at the proper distance

from that file, will face to the front by a half face to the right, and take the touch of elbows to the left.

406. The company being in march to the front in four ranks, when the instructor shall wish to form it into two ranks, he will command:

1. *In two ranks, form company.* 2. *By the right, undouble files.* 3. MARCH (or *double quick*—MARCH).

407. At the command *march*, the left guide and the left file of the company will continue to march straight to the front; the company will make a half face to the right and march obliquely, lengthening the step a little, in order to keep, as near as possible, abreast of the guide. As soon as the second file from the left shall have gained to the right the interval necessary for the left file to form into two ranks, the second file will face to the front by a half face to the left, and march straight forward; the left file will immediately form into two ranks, and take the touch of elbows to the left. Each file will execute successively what has just been prescribed for the file next to the left, and each file will form into two ranks when the file next on its right has obliqued the required distance and faced to the front.

408. If the company be supposed to make part of a column, left in front, these different movements will be executed according to the same principles and by inverse means, substituting the indication *left* for *right*.

END OF THE SCHOOL OF THE COMPANY.

INSTRUCTION FOR SKIRMISHERS.

GENERAL PRINCIPLES AND DIVISION OF THE INSTRUCTION.

The movements of skirmishers should be subjected to such rules as will give to the commander the means of moving them in any direction with the greatest promptitude.

It is not expected that these movements should be executed with the same precision as in closed ranks, nor is it desirable, as such exactness would materially interfere with their prompt execution.

When skirmishers are thrown out to clear the way for, and to protect the advance of, the main corps, their movements should be so regulated by this corps as to keep it constantly covered.

Every body of skirmishers should have a reserve, the strength and composition of which will vary according to circumstances.

If the body thrown out be within sustaining distance of the main corps, a very small reserve will be sufficient for each company, whose duty it shall be to fill vacant places, furnish the line with cartridges, relieve the fatigued, and serve as a rallying point for the skirmishers.

If the main corps be at a considerable distance, besides the company reserves, another reserve will be required, composed of entire companies, which

will be employed to sustain and reinforce such parts of the line as may be warmly attacked; this reserve should be strong enough to relieve at least half the companies deployed as skirmishers.

The reserves should be placed behind the center of the line of skirmishers, the company reserves at one hundred and fifty, and the principal reserve at four hundred paces. This rule, however, is not invariable. The reserves, while holding themselves within sustaining distance of the line, should be, as much as possible, in position to afford each other mutual protection, and must carefully profit by any accidents of the ground to conceal themselves from the view of the enemy, and to shelter themselves from his fire.

The movements of skirmishers will be executed in quick, or double quick time. The run will be resorted to only in cases of urgent necessity.

Skirmishers will be permitted to carry their pieces in the manner most convenient to them.

The movements will be habitually indicated by the sounds of the bugle.

The officers, and, if necessary, the non-commissioned officers, will repeat, and cause the commands to be executed, as soon as they are given; but to avoid mistakes, when the signals are employed, they will wait until the last bugle note is sounded before commencing the movement.

When skirmishers are ordered to move rapidly, the officers and non-commissioned officers will see that the men economize their strength, keep cool, and profit by all the advantages which the ground may offer for cover. It is only by this continual watchfulness on the part of all grades that a line of skirmishers can attain success.

This instruction will be divided into five articles, and subdivided as follows:

ARTICLE I.

1. To deploy forward.
2. To deploy by the flank.
3. To extend intervals.
4. To close intervals.
5. To relieve skirmishers.

ARTICLE II.

1. To advance in line.
2. To retreat in line.
3. To change direction.
4. To march by the flank.

ARTICLE III.

1. To fire at a halt.
2. To fire marching.

ARTICLE IV.

1. The rally.
2. To form column to march in any direction.
3. The assembly.

ARTICLE V.

1. To deploy a battalion as skirmishers.
2. To rally the battalion deployed as skirmishers.

In the first four articles, it is supposed that the movements are executed by a company deployed as skirmishers, on a front equal to that of the battalion in order of battle. In the fifth article, it is supposed that each company of the battalion, being deployed as skirmishers, occupies a front of one hundred paces. From these two examples, rules may be deduced for all cases, whatever may be the numerical strength of the skirmishers and the extent of ground they ought to occupy.

ARTICLE I.

DEPLOYMENTS.

A company may be deployed as skirmishers in two ways: forward, and by the flank.

The deployment forward will be adopted when the company is behind the line on which it is to be established as skirmishers; it will be deployed by the flank, when it finds itself already on that line.

Whenever a company is to be deployed as skirmishers, it will be divided into two platoons, and each platoon will be subdivided into two sections; the comrades in battle, forming groups of four men, will be careful to know and to sustain each other. The captain will assure himself that the files in the center of each platoon and section are designated.

A company may be deployed as skirmishers on its right, left, or center file, or any other named file whatsoever. In this manner skirmishers may be thrown forward with the greatest possible rapidity on any ground they may be required to occupy.

A chain of skirmishers ought generally to preserve their alignment, but no advantages which the ground may present should be sacrificed to attain this regularity.

The interval between skirmishers depends on the extent of ground to be covered; but in general it is not proper that the groups of four men should be removed more than forty paces from each other. The habitual distance between men of the same group in open grounds will be five paces; in no case will they lose sight of each other.

The front to be occupied to cover a battalion comprehends its front and the half of each interval which separates it from the battalion on its right and left. If a line whose wings are not supported

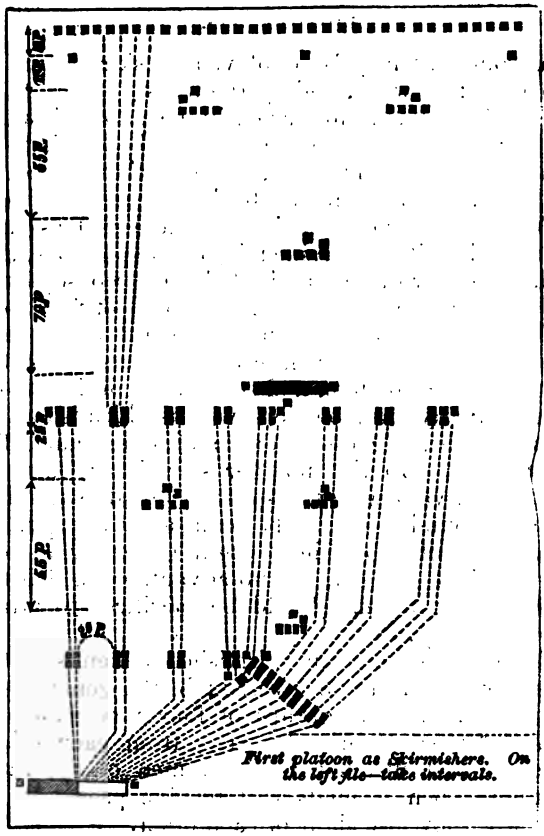

First platoon as Skirmishers. On the left file—take intervals.

Plate 45.

should be covered by skirmishers, it will be necessary either to protect the flanks with skirmishers, or to extend them in front of the line so far beyond the wings as effectually to oppose any attempt which might be made by the enemy's skirmishers to disturb the flanks.

TO DEPLOY FORWARD. (Plate 45.)

(A.) A company being at a halt or in march, when the captain shall wish to deploy it forward on the left file of the first platoon, holding the second platoon in reserve, he will command:

1. *First platoon—as skirmishers.*
2. *On the left file—take intervals.*
3. MARCH (*or double quick*—MARCH).

(C.) At the first command, the second and third lieutenants will place themselves rapidly two paces behind the centers of the right and left sections of the first platoon; the fifth sergeant will move one pace in front of the center of the first platoon, and will place himself between the two sections in the front rank as soon as the movement begins; the fourth sergeant will place himself on the left of the front rank of the same platoon as soon as he can pass. The captain will indicate to this sergeant the point on which he wishes him to direct his march. The first lieutenant, placing himself before the center of the second platoon, will command:

Second platoon backward—MARCH.

(D.) At this command, the second platoon will step three paces to the rear, so as to unmask the flank of the first platoon. It will then be halted by its chief, and the second sergeant will place himself on the left, and the third sergeant on the right flank

of this platoon. If the company is on the march, the second platoon will be halted at the first command.

(A.) At the command *march*, the left group of four men, conducted by the fourth sergeant, will direct itself on the point indicated; all the other groups of fours throwing forward briskly the left shoulder, will move diagonally to the front in double quick time, so as to gain to the right the space of twenty paces, which shall be the distance between each group and that immediately on its left. When the second group from the left shall arrive on a line with and twenty paces from the first, it will march straight to the front, conforming to the gait and direction of the first, keeping constantly on the same alignment and at twenty paces from it. The third group, and all the others, will conform to what has just been prescribed for the second; they will arrive successively on the line. The right guide will arrive with the last group.

(C.) The left guide having reached the point where the left of the line should rest, the captain will command the skirmishers to halt; the men composing each group of fours will then immediately deploy at five paces from each other, and to the right and left of the front-rank man of the even file in each group, the rear-rank men placing themselves on the left of their file leaders. If any groups be not in line at the command *halt*, they will move up rapidly, conforming to what has just been prescribed.

If, during the deployment, the line should be fired upon by the enemy, the captain may cause the groups of fours to deploy, as they gain their proper distances.

The line being formed, the non-commissioned officers on the right, left, and center of the platoon will place themselves ten paces in rear of the line

and, opposite, the positions they respectively occupied. The chiefs of sections will promptly rectify any irregularities, and then place themselves twenty-five or thirty paces in rear of the center of their sections, each having with him four men taken from the reserve, and also a bugler, who will repeat, if necessary, the signals sounded by the captain.

Skirmishers should be particularly instructed to take advantage of any cover which the ground may offer, and should lie flat on the ground whenever such a movement is necessary to protect them from the fire of the enemy. Regularity in the alignment should yield to this important advantage.

(A.) When the movement begins, the first lieutenant will face the second platoon *about*, and march it promptly, and by the shortest line, to about one hundred and fifty paces in rear of the center of the line. He will hold it always at this distance, unless ordered to the contrary.

The reserve will conform itself to all the movements of the line. *This rule is general.*

Light troops will carry their bayonets habitually in the scabbard, and this rule applies equally to the skirmishers and the reserve; whenever bayonets are required to be fixed, a particular signal will be given. The captain will give a general superintendence to the whole deployment, and then promptly place himself about eighty paces in rear of the center of the line. He will have with him a bugler and four men taken from the reserve.

The deployment may be made on the right or the center of the platoon, by the same commands, substituting the indication *right* or *center* for that of *left* file.

The deployment on the [illegible] center will be made according to the [illegible] above; in this latter case, the center of the platoon

will be marked by the right group of fours in the second section; the fifth sergeant will place himself on the right of this group, and serve as the guide of the platoon during the deployment.

In whatever manner the deployment be made, on the right, left, center (or any file), the men in each group of fours will habitually deploy at five paces from each other, and upon the front-rank man of the even-numbered file. The deployments will habitually be made at twenty paces interval; but if a greater interval be required, it will be indicated in the command.

If a company be thrown out as skirmishers, so near the main body as to render a reserve unnecessary, the entire company will be extended in the same manner, and according to the same principles, as for the deployment of a platoon. In this case, the third lieutenant will command the fourth section, and a non-commissioned officer designated for that purpose, the second section; the fifth sergeant will act as center guide; the file closers will place themselves ten paces in rear of the line, and opposite their places in line of battle. The first and second lieutenant will each have a bugler near him.

TO DEPLOY BY THE FLANK. (Plate 46.)

(D.) The company being at a halt, when the captain shall wish to deploy it by the flank, holding the first platoon in reserve, he will command:

1. *Second platoon—as skirmishers.* 2. *By the right flank—take intervals.* 3. MARCH (or *double quick*—MARCH).

(A.) At the first command, the first and third lieutenants will place themselves, respectively, two paces behind the centers of the first and second sections of the second platoon; the fifth sergeant will

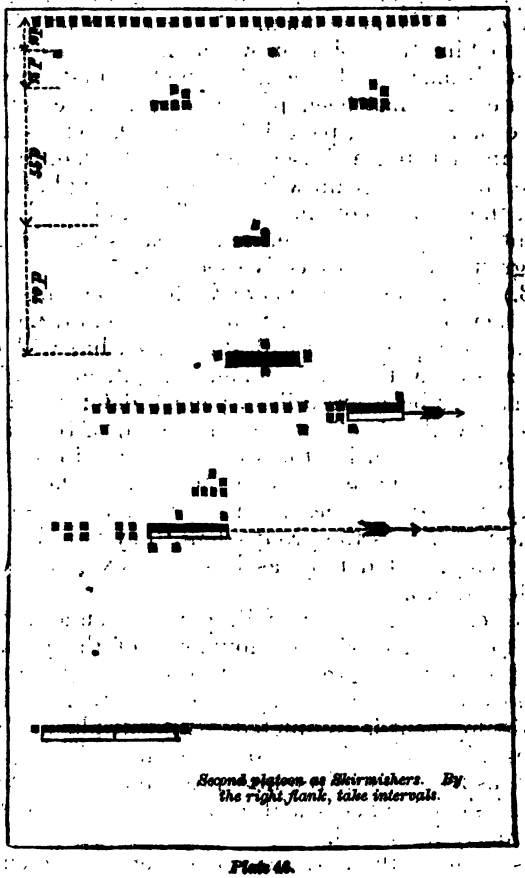

Second platoon as Skirmishers. By the right flank, take intervals.

Plate 46.

place himself one pace in front of the center of the second platoon; the third sergeant, as soon as he can pass, will place himself on the right of the front rank of the same platoon. The captain will indicate to him the point on which he wishes him to direct his march. The chief of the first platoon will execute what has been prescribed for the chief of the second platoon, page 155, C and D. The fourth sergeant will place himself on the left flank of the reserve, the first sergeant will remain on the right flank.

At the second command, the first and third lieutenants will place themselves two paces behind the left group of their respective sections.

(B.) At the command *march*, the second platoon will face to the right, and commence the movement; the left group of fours will stand fast, but will deploy as soon as there is room on its right, conforming to what has been prescribed, page 156, C; the third sergeant will place himself on the left of the right group, to conduct it; the second group will halt at twenty paces from the one on its left, the third group at twenty paces from the second, and so on to the right. As the groups halt, they will face to the enemy, and deploy, as has been explained for the left group.

The chiefs of sections will pay particular attention to the successive deployments of the groups, keeping near the group about to halt, so as to rectify any errors which may be committed. When the deployment is completed, they will place themselves thirty paces in rear of the center of their sections, as has been heretofore prescribed. The noncommissioned officers will also place themselves as previously indicated.

As soon as the movement commences, the chief of the first platoon, causing it to face about, will move it as indicated, page 157, A.

The deployment may be made by the left flank according to the same principles, substituting *left flank* for *right flank*.

If the captain should wish to deploy the company upon the center of one of the platoons, he will command:

1. *Second platoon—as skirmishers.* 2. *By the right and left flanks—take intervals.* 3. MARCH (or *double quick*—MARCH).

At the first command, the officers and non-commissioned officers will conform to what has been prescribed, page 157, A.

At the second command, the first lieutenant will place himself behind the left group of the right section of the second platoon; the third lieutenant behind the right group of the left section of the same platoon.

At the command *march*, the right section will face to the right, the left section will face to the left, the group on the right of this latter section will stand fast. The two sections will move off in opposite directions; the third sergeant will place himself on the left of the right file to conduct it, the second sergeant on the right of the left file. The two groups nearest that which stands fast, will each halt at twenty paces from this group, and each of the other groups will halt at twenty paces from the group which is in the rear of it. Each group will deploy as heretofore prescribed, page 160, B.

The first and third lieutenants will direct the movement, holding themselves always abreast of the group which is about to halt.

The captain can cause the deployment to be made on any named group whatsoever; in this case, the fifth sergeant will place himself before the group

Plate 47.

indicated, and the deployment will be made according to the principles heretofore prescribed.

The entire company may be also deployed, according to the same principles.

TO EXTEND INTERVALS.—(Plate 47.)

This movement, which is employed to extend a line of skirmishers, will be executed according to the principles prescribed for deployments.

If it be supposed that the line of skirmishers is at a halt, and that the captain wishes to extend it to the left, he will command:

1. *By the left flank* (*so many paces*), *extend intervals.* 2. MARCH (or *double quick*—MARCH).

At the command *march*, the group on the right will stand fast, all the other groups will face to the left, and each group will extend its interval to the prescribed distance by the means indicated, page 160, B.

(C.) The men of the same group will continue to preserve between each other the distance of five paces, unless the nature of the ground should render it necessary that they should close nearer, in order to keep in sight of each other. The intervals refer to the spaces between the groups, and not to the distances between the men in each group. The intervals will be taken from the right or left man of the neighboring group.

If the line of skirmishers be marching to the front, and the captain should wish to extend it to the right, he will command:

1. *On the left group* (*so many paces*), *extend intervals.* 2. MARCH (or *double quick*—MARCH).

(A.) The left group, conducted by the guide, will continue to march on the point of direction; the other groups throwing forward the left shoulder,

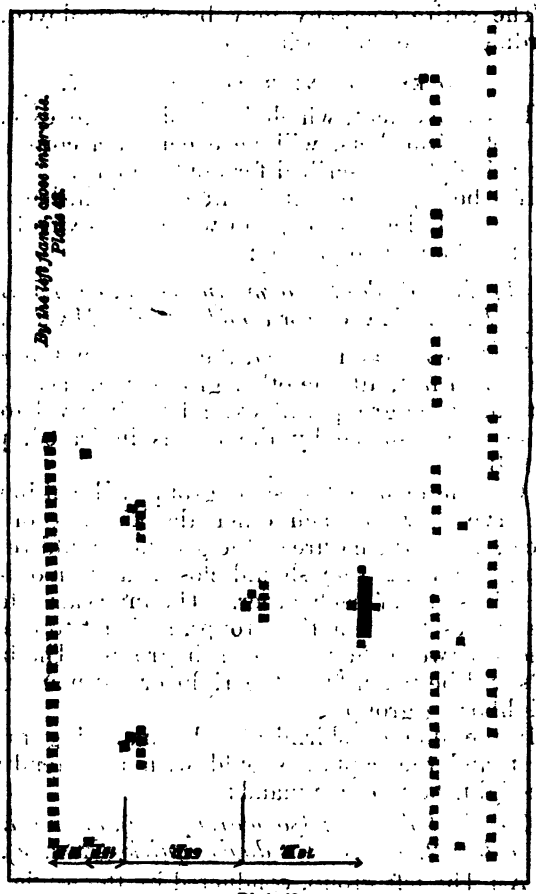


Plate 48.

and taking the double quick step, will open their intervals to the prescribed distance by the means indicated, page 156, A, conforming also to what is prescribed, page 163, C.

Intervals may be extended on the right center (or any group) of the line, according to the same principles.

If, in extending intervals, it be intended that one company or platoon should occupy a line which had been previously occupied by two, the men of the company or platoon which is to retire will fall successively to the rear as they are relieved by the extension of the intervals.

TO CLOSE INTERVALS.—(Plate 48.)

This movement, like that of opening intervals, will be executed according to the principles prescribed for the deployments.

If the line of skirmishers be halted, and the captain should wish to close intervals to the left, he will command:

1. *By the left flank* (*so many paces*), *close intervals.*
2. MARCH (or *double quick*—MARCH).

At the command *march*, the left group will stand fast, the other groups will face to the left and close to the prescribed distance, each group facing to the enemy as it attains its proper distance.

If the line be marching to the front, the captain will command:

1. *On the left group* (*so many paces*), *close intervals.*
2. MARCH (or *double quick*—MARCH).

The left group, conducted by the guide, will continue to move on in the direction previously indicated; the other groups, advancing the right shoul-

der, will close to the left, until the intervals are reduced to the prescribed distance.

Intervals may be closed on the right, center (or any group), according to the same principles.

When intervals are to be closed up, in order to reinforce a line of skirmishers, so as to cause two companies to cover the ground which had been previously occupied by one, the new company will deploy so as to finish its movement at twenty paces in rear of the line it is to occupy, and the men will successively move upon that line, as they shall be unmasked by the men of the old company. The reserves of the two companies will unite behind the center of the line.

TO RELIEVE A COMPANY DEPLOYED AS SKIRMISHERS.

When a company of skirmishers is to be relieved, the captain will be advised of the intention, which he will immediately communicate to his first and second lieutenants.

The new company will execute its deployment forward, so as to finish the movement at about twenty paces in rear of the line.

Arrived at this distance, the men of the new company, by command of their captain, will advance rapidly a few paces beyond the old line, and halt; the new line being established, the old company will assemble on its reserve, taking care not to get into groups of fours until they are beyond the fire of the enemy.

If the skirmishers to be relieved are marching in retreat, the company thrown out to relieve them will deploy by the flank, as prescribed, page 158, A, and following. The old skirmishers will continue to retire with order, and having passed the new line, they will form upon the reserve.

ARTICLE II.

To Advance.

TO ADVANCE IN LINE, AND TO RETREAT IN LINE.

When a platoon or a company deployed as skirmishers is marching by the front, the guide will be habitually in the center. No particular indication to this effect need be given in the commands, but if on the contrary it be intended that the directing guide should be on the right, or left, the command *guide right*, or *guide left*, will be given immediately after that of forward.

The captain, wishing the line of skirmishers to advance, will command:

1. *Forward.* 2. MARCH (or *double quick*—MARCH).

This command will be repeated with the greatest rapidity by the chiefs of sections, and in case of need, by the sergeants. This rule is general, whether the skirmishers march by the front or by the flank.

(A.) At the first command, the three sergeants will move briskly on the line, the first on the right, the second on the left, and the third in the center.

(B.) At the command *march*, the line will move to the front, the guide charged with the direction will move on the point indicated to him, the skirmishers will hold themselves aligned on this guide, and preserve their intervals toward him.

The chiefs of sections will march immediately behind their sections, so as to direct their movements.

The captain will give a general superintendence to the movement.

When he shall wish to halt the skirmishers, he will command:

HALT.

(C.) At this command, briskly repeated, the line will halt. The chiefs of sections will promptly rectify any irregularity in the alignment and intervals, and after taking every possible advantage which the ground may offer for protecting the men, they, with the three sergeants in the line, will retire to their proper places in rear.

The captain wishing to march the skirmishers in retreat, will command:

1. *In retreat.* 2. MARCH (or *double quick*—MARCH).

At the first command, the three sergeants will move on the line as prescribed, page 167, A.

At the command *march*, the skirmishers will face about individually, and march to the rear, conforming to the principles prescribed, page 167, B.

The officers and sergeants will use every exertion to preserve order.

To halt the skirmishers, marching in retreat, the captain will command:

HALT.

At this command the skirmishers will halt, and immediately face to the front.

The chiefs of sections and the three guides will each conform himself to what is prescribed, page 168, C.

TO CHANGE DIRECTION.

If the commander of a line of skirmishers shall wish to cause it to change direction to the right, he will command:

1. *Right wheel.* 2. MARCH (or *double quick*—MARCH).

At the command *march*, the right guide will mark time in his place; the left guide will move in a circle to the right, and that he may properly regu-

late his movements, will occasionally cast his eyes to the right, so as to observe the direction of the line, and the nature of the ground to be passed over. The center guide will also march in a circle to the right, and in order to conform his movements to the general direction, will take care that his steps are only half the length of the steps of the guide on the left.

The skirmishers will regulate the length of their steps by their distance from the marching flank, being less as they approach the pivot, and greater as they are removed from it; they will often look to the marching flank, so as to preserve the direction and their intervals.

When the commander of the line shall wish to resume the direct march, he will command:

1. *Forward.* 2. MARCH.

At the command *march*, the line will cease to wheel, and the skirmishers will move direct to the front; the center guide will march on the point which will be indicated to him.

If the captain should wish to halt the line, in place of moving it to the front, he will command:

HALT.

At this command, the line will halt.

A change of direction to the left will be made according to the same principles, and by inverse means.

A line of skirmishers marching in retreat will change direction by the same means, and by the same commands, as a line marching in advance; for example, if the captain should wish to refuse his left, now become the right, he will command: 1. *Left wheel.* 2. MARCH. At the command *halt*, the skirmishers will face to the enemy.

But if, instead of halting the line, the captain should wish to continue to march it in front, he will, when he judges the line has wheeled sufficiently, command:

1. *In retreat.* 2. MARCH.

TO MARCH BY THE FLANK.

The captain, wishing the skirmishers to march by the right flank, will command:

1. *By the right flank.* 2. MARCH (or *double quick* — MARCH).

At the first command, the three sergeants will place themselves on the line.

At the command *march*, the skirmishers will face to the right and move off; the right guide will place himself by the side of the leading man on the right to conduct him, and will march *on* the point indicated; each skirmisher will take care to *follow* exactly in the direction of the one immediately preceding him, and to preserve his distance.

The skirmishers may be marched by the left flank, according to the same principles, and by the same commands, substituting *left* for *right;* the left guide will place himself by the side of the leading man to conduct him.

If the skirmishers be marching by the flank, and the captain should wish to halt them, he will command:

HALT.

At this command, the skirmishers will halt and face to the enemy. The officers and sergeants will conform to what has been prescribed, page 168, C.

The reserve should execute all the movements of the line, and be held always about one hundred and

fifty paces from it, so as to be in position to second its operations.

When the chief of the reserve shall wish to unmask it in advance, he will command: 1. *Platoons, forward*. 2. *Guide left*. 3. MARCH! If he should wish to march it in retreat, he will command: 1. *In retreat*. 2. MARCH! 3. *Guide right*. At the command *halt*, it will reface to the enemy.

The men should be made to understand that the signals or commands, such as *forward*, means that the skirmishers shall march on the enemy; *in retreat*, that they shall retire, and to *the right* or *left flank*, that the men must face to the right or left, whatever may be their position.

If the skirmishers be marching by the flank, and the captain should wish to change direction to the right (or left), he will command: 1. *By file right* (or *left*). 2. MARCH!

ARTICLE III.

The Firings.

Skirmishers will fire either at a halt or marching.

TO FIRE AT A HALT.

To cause this fire to be executed, the captain will command:

Commence—FIRING.

At this command, briskly repeated, the men of the front rank will commence firing; they will reload rapidly, and hold themselves in readiness to fire again. During this time the men of the rear rank will come to a ready, and as soon as their respective file leaders have loaded, they will also fire and reload. The men of each file will then carry

tinue the firing, conforming to this principle, that the one or the other shall always have his piece loaded.

Light troops should be always calm, so as to aim with accuracy; they should, moreover, endeavor to estimate correctly the distances between themselves and the enemy to be hit, and thus be enabled to deliver their fire with the greater certainty of success.

Skirmishers will not remain in the same place while reloading, unless protected by accidents in the ground.

TO FIRE MARCHING.

This fire will be executed by the same commands as the fire at a halt.

(A.) At the command, *commence firing*, if the line be advancing, the front-rank man of every file will halt, fire, and reload before throwing himself forward. The rear-rank man of the same file will continue to march, and after passing ten or twelve paces beyond his front-rank man, will halt, come to a ready, select his object, and fire when his front-rank man has loaded; the fire will thus continue to be executed by each file; the skirmishers will keep united, and endeavor, as much as possible, to preserve the general direction of the alignment.

(B.) If the line be marching in retreat, at the command, *commence firing*, the front-rank man of every file will halt, face to the enemy, fire, and then reload while moving to the rear; the rear-rank man of the same file will continue to march, and halt ten or twelve paces beyond his front-rank man, face about, come to a ready, and fire, when his front-rank man has passed him in retreat and loaded; after which, he will move to the rear, reloading while so moving. The front-rank man in his turn, after marching briskly to the rear, will halt at ten

or twelve paces from the rear rank, face to the enemy, finish loading his piece and fire, conforming to what has just been prescribed for the rear-rank man; the firing will thus be continued.

(B.) If the company be marching by the right flank, at the command, *commence firing*, the front-rank man of every file will face to the enemy, step one pace forward, halt, and fire; the rear-rank man will continue to move forward. As soon as the front-rank man has fired, he will place himself briskly behind his rear-rank man and reload while marching. When he has loaded, the rear-rank man will, in his turn, face to the enemy, step one pace forward, halt, and fire, and returning to the ranks, will place himself behind his front-rank man; the latter, in his turn, will act in the same manner, observing the same principles. At the command, *cease firing*, the men of the rear rank will retake their original positions, if not already there.

If the company be marching by the left flank, the fire will be executed according to the same principles, but in this case it will be the rear-rank man who will fire first.

The following rules will be observed in the cases to which they apply.

If the line be firing at a halt, or while marching by the flank, at the command, *forward*—MARCH, it will be the men whose pieces are loaded, without regard to the particular rank to which they belong, who will move to the front. Those men whose pieces have been discharged, will remain in their places to load them before moving forward, and the firing will be continued agreeably to the principles prescribed, page 172, A.

If the line be firing either at a halt, advancing, or while marching by the flank, at the command, *in retreat*—MARCH, the men whose pieces are loaded

will remain faced to the enemy, and will fire in this position; the men whose pieces are discharged will retreat, leading them, and the fire will be continued agreeably to the principles prescribed, page 172, B.

If a line of skirmishers be firing either at a halt, advancing, or in retreat, at the command, *by the right (or left) flank*—MARCH, the men whose pieces are loaded will step one pace out of the general alignment, face to the enemy, and fire in this position; the men whose pieces are unloaded will face to the right (or left) and march in the direction indicated. The men who stepped out of the ranks will place themselves, immediately after firing, upon the general direction, and in rear of their front or rear rank man, as the case may be. The fire will continue according to the principles prescribed, page 173, B.

Skirmishers will be habituated to load their pieces while marching; but they will be enjoined to halt always an instant, when in the act of charging cartridge and ramming.

They should be practiced to fire and load kneeling, lying down, and sitting, and much liberty should be allowed in these exercises, in order that they may be executed in the manner found to be most convenient. Skirmishers should be cautioned not to forget that, in whatever position they may load, it is important that the piece should be placed upright before ramming, in order that the entire charge of powder may reach the bottom of the bore.

In commencing the fire, the men of the same rank should not all fire at once, and the men of the same file should be particular that one or the other of them be always loaded.

In executing the officers commanding the skirmishers should seize on every advantage which the

ground may present, for arresting the enemy as long as possible.

At the signal to *cease firing*, the captain will see that the order is promptly obeyed; but the men who may not be loaded, will load. If the line be [illegible], it will continue the movement; but the man of each file who happens to be in front, will wait until the man in the rear shall be abreast with him.

If a line of skirmishers be firing advancing, at the command, *halt*, the line will re-form upon the skirmishers who are in front; when the line is retreating, upon the skirmishers who are in the rear.

Officers should watch with the greatest possible vigilance over a line of skirmishers; in battle, they should neither carry a rifle or fowling piece. In all the firings, they, as well as the sergeants, should see that order and silence are preserved, and that the skirmishers do not wander imprudently; they should especially caution them to be calm and collected; not to fire until they distinctly perceive the objects at which they aim, and are sure that those objects are within proper range. Skirmishers should take advantage promptly, and with intelligence, of all shelter, and of all accidents of the ground, to conceal themselves from the view of the enemy, and to protect themselves from his fire. It may often happen that intervals are momentarily lost when several men near each other find a common shelter; but when they quit this position, they should immediately resume their intervals and their places in line, so that they may not, by crowding, needlessly expose themselves to the fire of the enemy.

ARTICLE IV.

The Rally.

TO FORM COLUMN.

A company deployed as skirmishers, is rallied in order to oppose the enemy with better success; the rallies are made at a run, and with bayonets fixed; when ordered to rally, the skirmishers fix bayonets without command.

There are several ways of rallying, which the chief of the line will adopt according to circumstances.

If the line, marching, or at a halt, be merely disturbed by scattered horsemen, it will not be necessary to fall back on the reserve, but the captain will cause bayonets to be fixed. If the horsemen should, however, advance to charge the skirmishers, the captain will command, *rally by fours.* (Plate 42, A.) The line will halt, if marching, and the four men of each group will execute this rally in the following manner: the front-rank man of the even-numbered file will take the position of *guard against cavalry*; the rear-rank man of the odd-numbered file will also take the position of *guard against cavalry*, turning his back to him, his right foot thirteen inches from the right foot of the former, and parallel to it; the front-rank man of the odd file, and the rear-rank man of the even file, will also place themselves back to back, taking a like position, and between the two men already established, facing to the right and left; the right feet of the four men will be brought together, forming a square, and serving for mutual support. The four men in each group will come to a ready, fire as occasion may offer, and load without moving their feet.

The captain and chiefs of sections will each cause

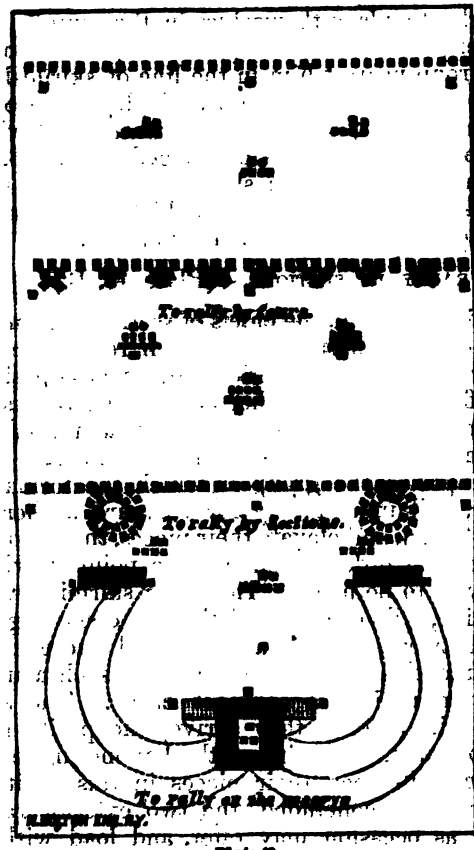

To rally by Sections.
To rally by Sections.
To rally on the Centre.

Plate 69.

the four men who constitute his guard to form square, the men separating so as to enable him and the bugler to place themselves in the center. The three sergeants will each promptly place himself in the group nearest him in the line of skirmishers.

If the captain desires again to deploy the groups, he will command: *deploy as skirmishers;* at which each group will deploy as prescribed, page 156, C.

Whenever the captain shall judge these squares too weak, but should wish to hold his position by strengthening his line, he will command:

RALLY BY SECTIONS. (Plate 49, B.)

At this command, the chiefs of sections will move rapidly on the center group of their respective sections, or on any other interior group whose position might offer a shelter, or other particular advantage; the skirmishers will collect rapidly at a run on this group, and without distinction of numbers. The men composing the group on which the formation is made, will immediately form square, as heretofore explained, and elevate their pieces, the bayonets uppermost, in order to indicate the point on which the rally is to be made. The other skirmishers, as they arrive, will occupy and fill the open angular spaces between these four men, and successively rally round this first nucleus, and in such manner as to form rapidly a compact circle. The skirmishers will take, as they arrive, the position of charge bayonet, the point of the bayonet more elevated, and will cock their pieces in this position. The movement concluded, the two exterior ranks will fire as occasion may offer, and load without moving their feet.

The captain will move rapidly with his guard, wherever he may judge his presence most necessary.

The officers and sergeants will be particular to

observe that the rally is made in silence, and with promptitude and order, that some pieces in each of their subdivisions be at all times loaded, and that the fire is directed on those points only where it will be most effective.

If the reserve should be threatened, it will form into a circle around its chief.

If the captain desires again to deploy the sections, he will command, *form sections*; at this, the chief of each will dress his section on that file of the circle which is faced toward the enemy, the men taking their proper places. The sections will then be deployed forward, or by the flanks, on any file or group the captain may wish, as indicated page 155, A, and following, and page 158, D, and following.

If the captain, or commander of a line of skirmishers, formed of many platoons, should judge that the rally by sections does not offer sufficient resistance, he will cause the rally by platoons to be executed, and for this purpose, will command:

RALLY BY PLATOONS.

This movement will be executed according to the same principles, and by the same means, as the rally by sections. The chiefs of platoon will conform to what has been prescribed for the chiefs of section.

If the captain, or commander of the line of skirmishers, desires again to deploy the platoons, he will command, *form platoons*.

The captain wishing to rally the skirmishers on the reserve, will command:

RALLY ON THE RESERVE.—(Plate 49, C.)

At this command, the captain will move briskly on the reserve; the officer who commands it will take immediate steps to form square; for this pur-

pose, he will cause the half sections on the flanks to be thrown perpendicularly to the rear: he will order the men to come to a ready.

The skirmishers of each section, taking the run, will form rapidly into groups, and upon that man of each group who is nearest the center of the section. These groups will direct themselves diagonally toward each other, and in such manner as to form into sections with the greatest possible rapidity while moving to the rear; the officers and sergeants will see that this formation is made in proper order, and the chiefs will direct their sections upon the reserve, taking care to unmask it to the right and left. As the skirmishers arrive, they will continue and complete the formation of the square begun by the reserve, closing in rapidly upon the latter, without regard to their places in line; they will come to a ready without command, and fire upon the enemy; which will also be done by the reserve as soon as it is unmasked by the skirmishers.

If a section should be closely pressed by cavalry while retreating, its chief will command, *halt;* at this command, the men will form rapidly into a compact circle around the officer, who will re-form his section and resume the march, the moment he can do so with safety.

The formation of the square in a prompt and efficient manner requires coolness and activity on the part of both officers and sergeants.

The captain will also profit by every moment of respite which the enemy's cavalry may leave him; as soon as he can, he will endeavor to place himself beyond the reach of their charges, either by gaining a position where he may defend himself with advantage, or by returning to the corps to which he belongs. For this purpose, being in square, he will cause the company to break into

column by platoons at half distance; to this effect, he will command:

1. *Form column.* 2. MARCH.

(A.) At the command *march*, each platoon will dress on its center, and the platoon which was facing to the rear will face about without command. The guides will place themselves on the right and left of their respective platoons, those of the second platoon will place themselves at half distance from those of the first, counting from the rear rank. These dispositions being made, the captain can move the column in whatever direction he may judge proper.

If he wishes to march it in retreat, he will command:

1. *In retreat.* 2. MARCH (or *double quick*—MARCH).

At the command *march*, the column will immediately face by the rear rank (the file closers of the first platoon retaining their position), and move off in the opposite direction. As soon as the column is in motion, the captain will command:

3. *Guide right* (or *left*).

He will indicate the direction to the leading guide: the guides will march at their proper distances, and the men will keep aligned.

If again threatened by cavalry, the captain will command:

1. *Form square.* 2. MARCH.

At the command *march*, the column will halt; the first platoon will face about briskly, and the outer half sections of each platoon will be thrown perpendicularly to the rear, so as to form the second and third fronts of the square. The officers and

sergeants will promptly rectify any irregularities which may be committed.

If he should wish to march the column in advance, the captain will command:

1. *Form column.* 2. MARCH.

Which will be executed as prescribed, page 191, A. The column being formed, the captain will command:

1. *Forward.* 2. MARCH (or *double quick*—MARCH). 3. *Guide left* (or *right*).

At the second command, the column will move forward, and at the third command, the men will take the touch of elbows to the side of the guide.

If the captain should wish the column to gain ground to the right or left, he will do so by rapid wheels to the side opposite the guide, and for this purpose will change the guide whenever it may be necessary.

If a company be in column by platoon, at half distance, right in front, the captain can deploy the first platoon as skirmishers by the means already explained; but if it should be his wish to deploy the second platoon forward on the center file, leaving the first platoon in reserve, he will command:

1. *Second platoon—as skirmishers.* 2. *On the center file—take intervals.* 3. MARCH (or *double quick*—MARCH).

At the first command, the chief of the first platoon will caution his platoon to stand fast; the chiefs of sections of the second platoon will place themselves before the center of their sections; the first sergeant will place himself one pace in front of the center of the second platoon.

At the second command, the chief of the right sec-

tion, second platoon, will command: *Section right face;* the chief of the left section: *Section left face.*

At the command *march*, these sections will move off briskly in opposite directions, and having masked the first platoon, the chiefs of sections will respectively command: *By the left flank*—MARCH, and *By the right flank*—MARCH; and as soon as these sections arrive on the alignment of the first platoon, they will command: *As skirmishers*—MARCH. The groups will then deploy according to prescribed principles, on the right group of the left section, which will be directed by the fifth sergeant on the point indicated.

If the captain should wish the deployment made by the flank, the second platoon will be moved to the front by the means above stated, and halted after passing some steps beyond the alignment of the first platoon; the deployment will then be made by the flank according to the principles prescribed.

The Assembly.

A company deploy as skirmishers will be assembled when there is no longer danger of its being disturbed; the assembly will be made habitually in quick time.

The captain wishing to assemble the skirmishers on the reserve, will command:

ASSEMBLE ON THE RESERVE.

At this command, the skirmishers will assemble by groups of fours; the front-rank men will place themselves behind their rear-rank men; and each group of fours will direct itself on the reserve, where each will take its proper place in the ranks. When the company is re-formed, it will rejoin the battalion to which it belongs.

It may be also proper to assemble the skirmishers

on the center, or on the right or left of the line, either marching or at a halt.

If the captain should wish to assemble them on the center while marching, he will command:

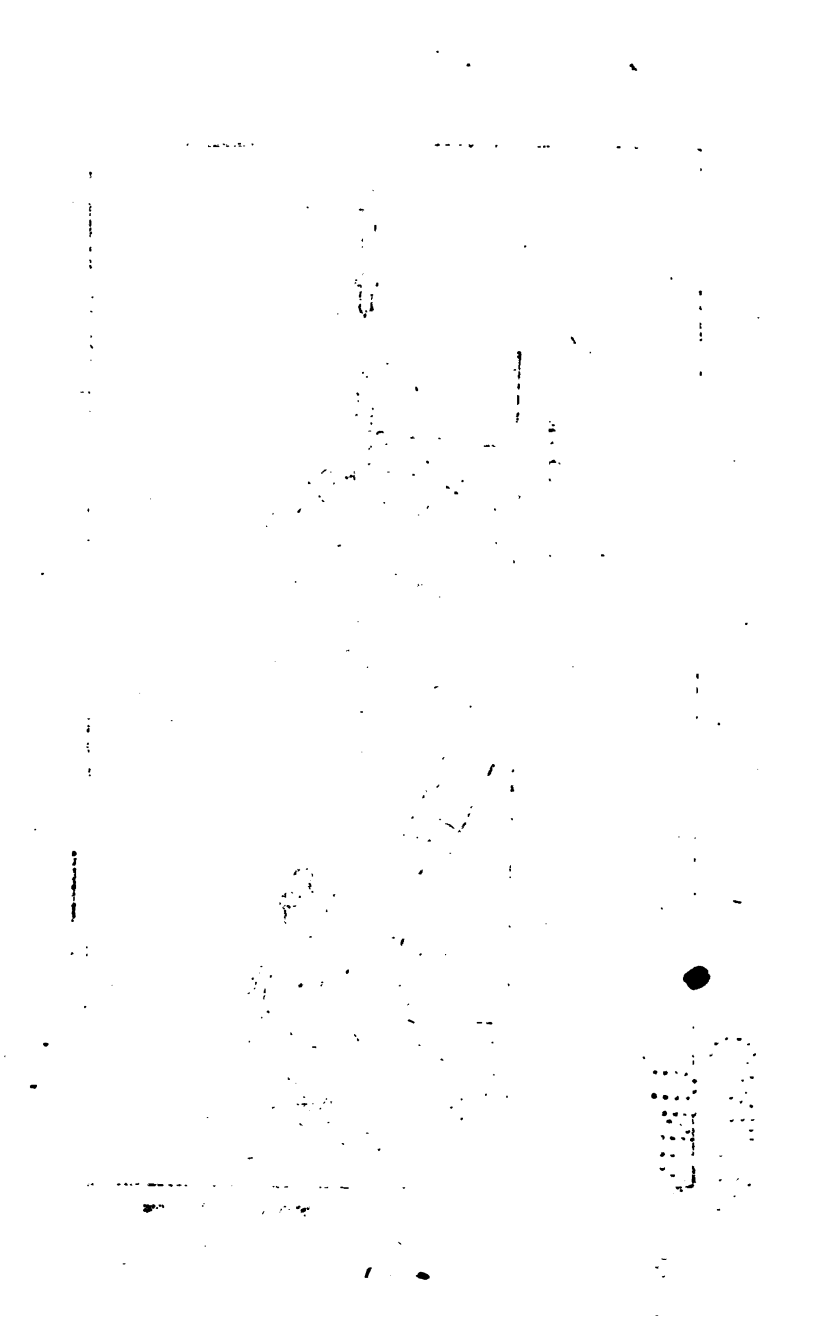
ASSEMBLE ON THE CENTER.

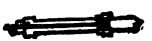
At this command, the center guide will continue to march directly to the front on the point indicated; the front-rank man of the directing file will follow the guide, and be covered by his rear-rank man; the other two comrades of this group, and likewise those on their left, will march diagonally, advancing the left shoulder and accelerating the gait, so as to re-form the groups while drawing nearer and nearer the directing file; the men of the right section will unite in the same manner into groups, and then upon the directing file, throwing forward the right shoulder. As they successively unite on the center, the men will bring their pieces to the right shoulder.

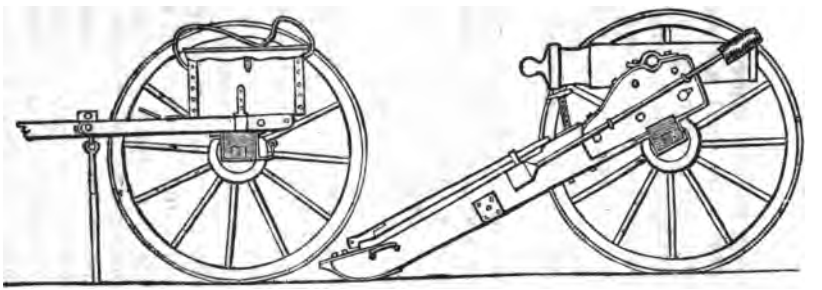
To assemble on the right, left (or any file), will be executed according to the same principles.

The assembly of a line marching in retreat will also be executed according to the same principles, the front-rank men marching behind their rear-rank men.

To assemble the line of skirmishers at a halt, and on the line they occupy, the captain will give the same commands; the skirmishers will face to the right or left, according as they should march by the right or left flank, re-form the groups while marching, and thus arrive on the file which served as the point of formation. As they successively arrive, the skirmishers will support arms.







MOUNTAIN HOWITZER AND LIMBER.

MANUAL FOR LIGHT ARTILLERY.

1. For instruction in the manual of light artillery, the piece selected is the light 12-pdr. howitzer, used for mountain service, on account of its simplicity, and as embracing all the principles required for serving a light field piece. It is generally transported by mules. The piece and the shafts may be packed upon one mule, the carriage upon another, and the ammunition chest upon a third. The carriage is adapted for draught.

In case the pieces are served by a fully organized company, a jumper or short light pole, with a cross piece of iron at the end, is substituted for the shafts. A rope, attached to the axle-tree and running through rings in the cross-piece, enables the detachments to draw the pieces. In coming into battery, the rope is detached and held in a coil ready for use.

2. The mule that draws the piece, or carries when packed, is called the *shaft mule;* the mule that carries the carriage, when packed, the *carriage mule;* and the mule on which the ammunition chests are packed, the *ammunition mule.*

3. *The piece is in battery* when the shafts are detached, and it is in a proper position to be fired. The front in this case is the direction toward which the muzzle points. The front, when the shafts are attached, is the direction toward which the shafts point. The right of the piece in both cases, is the right of the cannoneer when facing to the front.

The position of the mules when the piece is in battery, is as follows:

The ammunition mule fifteen yards in the rear of the piece, the shaft mule two yards in the rear of the ammunition mule, and the carriage mule two yards in the rear of the shaft mule, all facing toward the piece.

4. *In the order of march, with the howitzer mounted on its carriage*, the shaft mule is hitched in, and the carriage and ammunition mules follow; the first two yards from the piece, and the second two yards from the first.

5. *In the order of march with the piece and carriage packed upon the mules*, the shaft mule leads, and the other two follow; the distance between each being two yards.

FORMING THE DETACHMENT.

6. Six men are required for the service of the piece. They are formed in two ranks, and told off from the right by the chief of piece; Nos. 1 and 2 being on the right, No. 3 and the gunner being in the center, and Nos. 4 and 5 on their left; the even numbers and the gunner being in the front, and the odd numbers in the rear rank.

The detachment is marched to the piece, and posted as follows:

POSTS OF THE DETACHMENT.

7. *In battery.* Nos. 1 and 2 about one yard outside of the wheels, and in line with the axle-tree, No. 1 being on the right, and No. 2 on the left; the gunner at the end of the trail; No. 3 opposite the knob of the cascable, covering No. 1; No. 4 on the right, and No. 5 on the left of the ammunition mule;

all facing to the front. The chief of piece is opposite to the trail, outside of and near the left cannoneers.

8. *In battery, without mules.* Nos. 4 and 5 are on the right and left of the ammunition chests, facing to the front.

9. *In the order of march, shaft mules hitched in.* Nos. 1 and 2 opposite to the muzzle; the gunner and No. 3 opposite to the trail; and Nos. 4 and 5 opposite to the saddle of the ammunition mule; the gunner and even numbers on the right, and the odd numbers on the left; all facing to the front, and covering each other in lines one yard from the wheels. The chief of piece is on the left of the driver of the shaft mule.

10. *In the order of march, mules packed.* Nos. 1 and 2 at the shaft mule; the gunner and No. 3 at the carriage mule; and Nos. 4 and 5 at the ammunition mule; the gunner and even numbers on the right, and odd numbers on the left; all opposite to the saddles, one yard from the mules, and facing to the front. The chief of piece is on the left of the driver of the shaft mule.

11. There is one driver to each mule. He is on the left of the mule, and holds the reins with the right hand, six inches from the mouth, the hand high and firm.

SERVICE OF THE PIECE.

12. The piece is in battery, the men at their posts. (No. 7.)

The shafts are placed on the ground, one yard and a half from the line of the right wheel, and parallel to it, the cross-bar opposite to the trail, the shafts pointing to the rear.

The chests, when the ammunition mule is absent, are on the ground, fifteen yards in rear of the trail,

their sides parallel to the axis of the piece, backs together, the turn-buckles outside.

13. At the command TAKE EQUIPMENTS, the gunner distributes the equipments. No. 1, with the assistance of No. 3, takes out the sponge. The gunner equips himself with the belt containing the hausse and priming wire, and with the knee-guard and the finger-stall, wearing the last on the second finger of the left hand. No. 3 wears the tube pouch containing friction tubes and the lanyard. Nos. 1 and 2 wear bricoles hung from the left shoulder to the right side. Nos. 2 and 5 wear haversacks hung from the right shoulder to the left side.

THE COMMANDS.

14. In loading by detail, the instructor gives all the commands.

The commands are: *Load by detail*, LOAD, 2, 3, 4; SPONGE, 2, 3, 4; RAM, 2, 3; READY; FIRE; and CEASE FIRING.

When the service of the piece is not executed by detail, the commands of the instructor are, either LOAD, COMMENCE FIRING, and CEASE FIRING; or, COMMENCE FIRING and CEASE FIRING. After the command COMMENCE FIRING, the action is continued without further commands from the instructor until the command CEASE FIRING.

The last command is repeated by the chief of piece and the gunner.

DUTIES OF THE CANNONEERS.

15. *Duties of the Gunner.*—In action, the gunner gives or repeats the commands of execution. At the command or signal to commence firing, he gives the word LOAD; plants the left foot opposite to the knob of the cascable; places the right knee upon it,

ground near, and on the left of the trail; places the hausse, when it is used; seizes the lunette with the right hand, to give the direction, and at the same time tends vent with the second finger of the left hand, the thumb on the base of the breech.

As soon as the piece is loaded and aimed, he removes the hausse; then rising, pricks the cartridge; gives the word READY, and stepping clear of the wheel to the side whence he can best observe the effect of the shot, gives the command, FIRE. He continues the action in the same manner, without further commands from the instructor, until the firing is ordered to cease.

When the instructor, instead of giving the command COMMENCE FIRING, gives that of LOAD, the gunner repeats it, and performs the same duties as just described, except that he does not command FIRE, until the firing is ordered to commence.

When the instructor gives all the commands, the gunner performs the same duties, but without repeating the commands.

16. *Duties of No. 1.*—Until the command LOAD, he stands square to the front, in line with the axle-tree, holding the sponge staff about the middle in the right hand, and trailing it at an angle of 45°.

For the convenience of instruction, the duties of No. 1 are divided into motions.

First motion.—At the command LOAD, No. 1 faces to his left, steps obliquely to his right with the right foot, and brings the sponge into a perpendicular position over the right toe, the elbow close to the side, the right hand at the height of the elbow.

Second motion.—He plants the left foot near, and in line with the wheel, and inclines the sponge across the body to the left, the right opposite to the middle of the body.

Third motion.—He places the right foot twelve

inches to the right of the left, heels on the same line; brings the sponge into a horizontal position, and extending the hands toward the ends of the staff, back of the right hand up, that of the left down, rests the sponge-head against the face of the piece; the knees straight, the feet turned out equally, and the body inclined forward.

Fourth motion.—He introduces the sponge, drops the left hand by the side of his thigh, and shoves the sponge to the bottom of the chamber.

17. At the command SPONGE, he carefully sponges out the chamber.

Second motion.—He draws out the sponge, pressing it upon the bottom of the bore, seizes the staff near the sponge head with the left hand, back down, and rests it against the face of the piece.

Third motion.—He turns the sponge over by bringing the hands together at the middle of the staff, and giving it a cant with each, throws the sponge over; at the same time turning the wrists so as to bring the staff horizontal. He then extends the hands toward the ends of the staff, back of the left up, that of the right down.

Fourth motion.—As soon as the charge is inserted, he introduces the rammer-head into the muzzle, and joins the left hand to the right.

18. At the command RAM, he sends the charge carefully home, throwing the left hand over the piece.

Second motion.—He throws out the sponge with the right hand, letting it slide through the hand as far as the middle of the staff, when he grasps it firmly, and seizing it close to the rammer-head with the left hand, back up, rests it against the face of the piece.

Third motion.—He raises the sponge to the height of his breast, and steps back, right foot first, to his

position opposite to the axle-tree; quits the staff with the left hand, and throwing the sponge uppermost, holds it at a trail in the right. He remains facing the piece until the command LOAD, when he steps up and performs the duties just described.

When the loading is not by detail, No. 1 goes through all his duties at the command LOAD.

At the flash of the gun, or command LOAD, he steps up and again performs his duties as before, and so on, until the command CEASE FIRING is given. At this command he resumes his post, faces to the front, first sponging out the piece if it has been commenced.

19. *Duties of Nos. 2 and 5.*—Until the command LOAD, Nos. 2 and 5 stand square to the front, the former in line with the axle-tree, the latter on the left of the ammunition mule, or chests.

At this command, No. 2 faces about and goes to the ammunition chest; and No. 5, having received a round of ammunition from No. 4, carries it to the piece; placing himself opposite to No. 1, and in line with the wheel, inserts the charge as soon as No. 1 has sponged, then steps back to the post of No. 2, opposite to the axle-tree, and there remains facing the piece until it is fired, when he returns to the ammunition chest; No. 2, having received a round of ammunition, carries it to within five yards of the wheel, where he remains until the piece is fired; he then moves forward and executes the remainder of the service as just described for No. 5.

Nos. 2 and 5, in moving to and from the piece, go at a run and pass each other by the right.

In inserting the charge they should be careful to keep the seam down, and to place the fuse in the axis of the bore.

At the command CEASE FIRING, they resume their posts, facing to the front.

20. *Duties of No.* 3.—No. 3 holds the handle of the lanyard in the right hand, the cord passing between the fingers, the hook between the forefinger and thumb. At the command LOAD, he takes a friction tube in the left hand, and passes the hook of the lanyard through the eye of the tube from right to left, continuing to hold the hook between the thumb and forefinger. At the word READY, he faces the piece, and steps up, keeping outside of the wheel; inserts the tube, steps back with the right foot, breaks to his rear a full pace with the left foot, and holds the lanyard slightly stretched, the handle at the height of the knee, back of the hand up, the left hand against the thigh. At the command FIRE, he gives a smart pull upon the lanyard, being careful to keep the hand low, and then resumes his post.

At the command CEASE FIRING he winds the lanyard upon its handle, and if dry, puts it in the tube pouch.

21. *Duties of No.* 4.—No. 4 attends at the ammunition chest, serves out ammunition, and prepares and inserts fuses.

CHANGING POSTS.

22. In order to instruct the men in all the duties at the piece, the instructor causes them to change posts by the following commands:

1. *Change Posts.* 2. MARCH.

At the first command, the cannoneers on the right of the piece face about, take off their equipments, and place them on the piece or ammunition chests. At the second command, all step off, each taking the post and equipments of the one in his front; No. 2 passing around the muzzle to gain the post of No. 1,

and No. 4 around the ammunition chest to take that of No. 5.

23. During the intervals of rest, the instructor will explain to the men the nomenclatures of the piece and carriage, and the names and uses of the implements and equipments.

SERVICE OF THE PIECE WITH DETACHMENTS OF DIFFERENT STRENGTH.

24. *Two men.* The gunner commands, tends vent, points, pricks, primes, and fires. No. 1 sponges, serves ammunition, and loads.

Three men. The gunner commands, tends vent, points, pricks, primes, and fires. No. 1 sponges. No. 2 serves ammunition, and loads.

Four men. The gunner commands, tends vent, points, and pricks. No. 1 sponges. No. 2 serves ammunition, and loads. No. 3 primes and fires.

Five men. No. 4 attends at the chests, and serves ammunition to No. 2, occasionally alternating with him. The other numbers serve as with four men.

Six men. No. 5 alternates habitually with No. 2. No. 4 remains at the chests. The other numbers serve as with four men.

SIGNAL DRILL WITHOUT THE MUSKET.

Signal	1. Rise up and face.	(A)
"	2. Form groups of four.	(B)
"	3. Double quick—march.	(C)
"	4. Form company at open ranks.	(D)
"	5. Dress by the right.	(E)
"	6. Front.	(F)
"	7. Close order—march.	(G)
"	8. Right dress.	
"	9. Front.	
"	10. In place—rest.	(H)
"	11. Attention.	(I)
"	12. Right—backward dress.	
"	13. Front.	
"	14. By platoons, right wheel—march.	
"	15. By platoons, left into line—march.	
"	16. By company, right wheel—march.	
"	17. Left into line—march.	
"	18. By the right of platoons to the rear into column.	
"	19. March.	
"	20. Left into line—march.	
"	21. Right—face.	(O)
"	22. March.	
"	23. By file.	(P)
"	24. Halt.	
"	25. Front—face.	
"	26. Dress.	
"	27. Front.	
"	28. To the rear open order.	(M)
"	29. March.	
"	30. Dress.	

Signal 31. Front.
" 32. Arms—up. (O)
" 33. Arms—down.
" 34. Arms—forward.
" 35. Arms—down.
" 36. Arms—to the rear.
" 37. Arms—front.
" 38. Arms—to the side.
" 39. Arms—down.
" 40. Salute.
" 41. Close order—march.
" 42. In place—rest. (H)
" 43. Attention.
" 44. Right—face. (O)
" 45. March—dismiss.

SIGNAL DRILL WITH THE MUSKET.

Signals 1 to 11 the same as manual without the musket.

Signal 12. Prepare to take arms.
" 13. Take— (K)
" 14. Arms. (L)
" 15. Shoulder—arms.
" 16. To the rear open order. (M)
" 17. March. (N)
" 18. Dress.
" 19. Front.
" 20. Order—arms.
" 21. Shoulder—arms.
" 22. Trail—arms.
" 23. Shoulder—arms.
" 24. Charge—bayonet.

Signal 25. Shoulder—arms.
" 26. Unfix—bayonets.
" 27. Shoulder—arms.
" 28. Right shoulder shift—arms.
" 29. Shoulder—arms
" 30. Left shoulder shift—arms.
" 31. Shoulder—arms.
" 32. Support—arms.
" 33. In place—rest.
" 34. Attention.
" 35. Shoulder—arms.
" 36. Present—arms.
" 39. Shoulder—arms.
" 40. Fix—bayonets.
" 41. Shoulder—arms.
" 42. Load.
" 43. Handle—cartridge.
" 44. Tear—cartridge.
" 45. Charge—cartridge.
" 46. Draw—rammer.
" 47. Ram—cartridge.
" 48. Return—rammer.
" 49. Cast—about.
" 50. Prime.
" 51. Shoulder—arms.
" 52. Ready.
" 53. Aim.
" 54. Recover—arms.
" 55. Aim.
" 56. Fire.
" 57. Shoulder—arms.
" 58. Close order—march.
" 59. Order—arms.
" 60. Stack—arms.
" 61. Right—face.
" 62. March.

(O)

ARM MANUAL.

In order to accustom the pupil more readily to the position of the soldier, and at the same time to render him more supple for acquiring a proficiency in the manual of arms, the following exercises should be practiced. Formed in one rank, at one pace apart, the instructor will give the command:

ARMS—UP.

One time and two motions.

First Motion.—Bring the forearms to a vertical position, the fingers closed, and hands against the right and left breasts.

Second Motion.—Extend the arms vertically over the head, open the fingers, and place the palms together.

ARMS—DOWN.

One time and two motions.

First Motion.—Bring the arms to the first position of arms up.

Second Motion.—Drop the hands with force to the sides.

ARMS—FRONT.

One time and two motions.

First Motion.—As in arms—up.

Second Motion.—Extend the arms horizontally in front of the body, the palms of the hands touching.

ARMS—DOWN.

One time and two motions.

As before.

ARMS—TO THE REAR.

One time and motion.

Carry the hands behind the body, the palms touching.

ARMS—FRONT.

One time and motion.

Carry the hands quickly to the side.

ARMS—TO THE SIDES.

One time and motion.

Extend the arms horizontally to the right and left.

ARMS—DOWN.

As before.

SALUTE.

One time and four motions.

First Motion.—Extend the arm horizontally to the right, palm down.

Second Motion.—Carry the hand to the visor of the cap.

Third Motion.—Carry the arm back to the horizontal position.

Fourth Motion.—Drop the hand quickly to the side.

NOTES ON DRILL.

(A.)—The instructor can adopt any method of facing the class or groups best suited to the condition of the school-room and benches. They may be faced by the left, and marched into line by the

left, forming the company on the right or left guide, who will be previously established as a base. For exhibition, the formation made by successive groups of four, entitled comrades, would be the best adapted and most pleasing.

(B.)—At the second signal, the company will march and form groups of four in double file, without regard to size.

(C.)—At the third signal, the march will immediately be made, on a trot, the elbows bent, with forearm to side, to the spot designated.

(D.)—At this signal each group will march into line, the front rank forming on the guide, and the rear rank forming eight steps to the rear in another line.

(E.)—At this signal the head is thrown obliquely to the guide or base, and the line is established, keeping the head in this position.

(F.)—At the sixth signal bring the head and eyes quick to the front.

(G.)—March forward to within thirteen inches of the front rank, and correct the alignment.

(H.)—Cross the hands in front, across the thighs, and bend slightly the left knee, the right leg straight.

(I.)—Resume the position of a soldier. At this part of the drill, if the musket is not used, the signals can be proceeded with by using the company drill with the arm exercise.

(K.)—Dividing this command gives the recruit an opportunity of seizing the stock before the final execution of the movement.

(L.)—This perfects the movement.

(M.)—"To the rear open order," gives time for the sergeant or a front rank man to step to the rear to mark the rear rank, which is done at—

(N.)—When the next signal is struck or sounded.

(O.)—In facing to the right, the double file movement may be executed, by numbering the front and rear man of each file, commencing with 1, 2—1, 2—1, 2, and so on. In facing by the right, No. 2—being the second, fourth, sixth, etc., file—after facing, will step to the right of No. 1. In facing to the left, No. 1 will, after facing, stand fast, while No. 2 will step to his left. In facing to the front, the files will resume their proper position. If the double file be found too difficult or intricate, the two ranks can be taught with the same signals.

(P.)—The direction for filing will be signaled by the instructor, as may suit the position the company may be placed in.

(R.)—The instructor will always be guided in his pauses between the signals, by the ability of his class.

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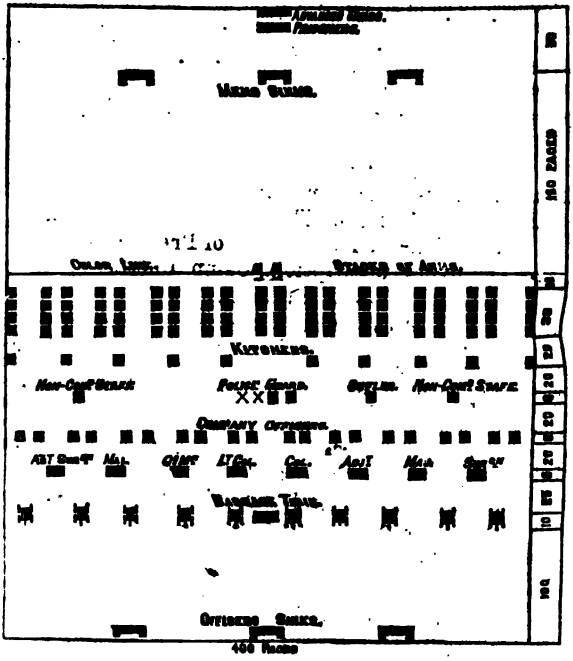
PLAN OF ENCAMPMENT

FOR A REGIMENT OF INFANTRY.



THE CAMP.

Camp is the place where the troops are established in tents, in huts, or in bivouac. Cantonments are the inhabited places which troops occupy for shelter when not put in barracks. The camping party is a detachment detailed to prepare a camp.

Reconnoissances should precede the establishment of the camp. For a camp of troops on the march, it is only necessary to look to the health and comfort of the troops, the facility of the communications—the convenience of wood and water, and the resources in provisions and forage. The ground for an intrenched camp, or a camp to cover a country, or one designed to deceive the enemy as to the strength of the army, must be selected, and the camp arranged for the object in view.

The camping-party of a regiment consists of the regimental quartermaster and quartermaster-sergeant, and a corporal and two men per company. The general decides whether the regiments camp separately or together, and whether the police guard shall accompany the camping party, or a larger escort shall be sent.

The ground selected for an encampment either on the march or for a more permanent camp, should be

such as will enable, as near as possible, the following order to be carried out. Of course circumstances will compel a variation from it at times:

CAMP OF INFANTRY.

Each company has its tents in two files, facing on a street perpendicular to the color line. The width of the street depends on the front of the camp, but should not be less than five paces.* The interval between the ranks of tents is two paces; between the files of tents of adjacent companies, two paces; between regiments, twenty-two paces.

The color line is ten paces in front of the front rank of tents. The kitchens are twenty paces behind the rear rank of company tents; the non-commissioned staff and sutler, twenty paces in rear of the kitchens; the company officers, twenty paces farther in rear, and the field and staff, twenty paces in rear of the company officers.

The company officers are in rear of their respective companies; the captains on the right.

The colonel and lieutenant-colonel are near the centre of the line of field and staff; the adjutant, a major and surgeon, on the right; the quartermaster, a major and assistant-surgeon, on the left.

The police guard is at the centre of the line of the non-commissioned staff, the tents facing to the front, the stacks of arms on the left.

The advanced post of the police guard is about two hundred paces in front of the color line, and opposite

* The pace is thirty inches, or two and a half feet.

the centre of the regiment, or on the best ground; the prisoners' tent about four paces in rear. In a regiment of the second line, the advanced post of the police guard is two hundred paces in rear of the line of its field and staff.

The horses of the staff officers and of the baggage train, are twenty-five paces in rear of the tents of the field and staff; the wagons are parked on the same line, and the men of the train camped near them.

The sinks of the men are one hundred and fifty paces in front of the color line; those of the officers one hundred paces in rear of the train. Both are concealed by bushes. When convenient, the sinks of the men may be placed in rear or on a flank. A portion of the earth dug out for sinks to be thrown back occasionally.

The front of the camp of a regiment of one thousand men in two ranks will be four hundred paces, or one fifth less paces than the number of files, if the camp is to have the same front as the troops in order of battle. But the front may be reduced to one hundred and ninety paces by narrowing the company streets to five paces; and if it be desirable to reduce the front still more, the tents of companies may be pitched in single file, those of a division facing on the same street.

CAMP OF CAVALRY.

In the cavalry, each company has one file of tents; the tents opening on the street, facing the left of the camp.

The horses of each company are placed in a single file, facing the opening of the tents, and are fastened

to pickets planted firmly in the ground, from three to six paces from the tents of the troops.

The interval between the file of tents should be such, that the regiment being broken into column of companies, each company should be on the column extension of the line on which the horses are to be picketed.

The streets separating the squadrons are wider than those between the companies by the interval separating squadrons in line; these intervals are kept free from any obstruction throughout the camp.

The horses of the rear rank are placed on the left of those of their file-leaders.

The horses of the lieutenants are placed on the right of their platoons; those of the captains on the right of the company.

Each horse occupies a space of about two paces. The number of horses in the company fixes the depth of the camp, and the distance between the files *of the* tents; the forage is placed between the tents.

The kitchens are twenty paces in front of each file of tents.

The non-commissioned officers are in the tents of the front rank. Camp-followers, teamsters, etc., are in the rear rank. The police guard in the rear rank, near the centre of the regiment.

The tents of the lieutenants are thirty paces in rear of the file of their company; the tents of the captains thirty paces in rear of the lieutenants.

The colonel's tent thirty paces in rear of the captain's, near the centre of the regiment; the lieutenant colonel on his right; the adjutant on his left; the majors on the same line, opposite the second company on

the right and left; the surgeon on the left of the adjutant.*

The field and staff have their horses on the left of their tents, on the same line with the company horses; sick horses are placed in one line on the right or left of the camp. The men who attend them have a separate file of tents; the forges and wagons in rear of this file. The horses of the train and of camp-followers are in one or more files extending to the rear, behind the right or left squadron. The advanced post of the police guard is two hundred paces in front, opposite the centre of the regiment; the horses in one or two files.

The sinks for the men are one hundred and fifty paces in front, those for officers one hundred paces in rear of the camp.

CAMP OF ARTILLERY.

The artillery is encamped near the troops to which it is attached, so as to be protected from attack, and to contribute to the defence of the camp. Sentinels for the park are furnished by the artillery, and, when necessary, by the other troops.

For a battery of six pieces the tents are in three files: one for each section; distance between the ranks of tents fifteen paces; tents opening to the front. The horses of each section are picketed in one file, ten paces to the left of the file of tents. In the horse artillery, or if the number of horses make it necessary, the

* When there is but one major to a regiment, the post of the colonel will be in the centre of the regiment, on the line of the field and staff; and that of the lieutenant-colonel in the right wing, in place of the senior major.

horses are in two files on the right and left of the file of tents. The kitchens are twenty-five paces in front of the front rank of tents. The tents of the officers are in the outside files of company tents, twenty-five paces in the rear of the rear rank; the captain on the right, the lieutenant on the left.

The park is opposite the centre of the camp, forty paces in rear of the officers' tents.

DUTIES IN CAMP AND GARRISON.

The duties in camp and garrison are to be conducted as far as practicable, in the same manner and on the same principles.

The *Reveille* is the signal for the men to rise, and the sentinel to leave off challenging.

The *Troop* is to sound or beat at — o'clock in the morning, for the purpose of assembling the men for duty and inspection at guard mounting.

The *Retreat* is to sound or beat at sunset, for the purpose of warning the officers and men for duty, and for reading the orders of the day.

The *Tattoo* is to be beat at — o'clock in the evening, after which no soldier is to be out of his tent or quarters, unless by special leave.

Peas-upon-a-trencher, the signal for a breakfast, is to sound or beat at — o'clock in the morning.

Roast Beef, the signal for dinner, is to sound or beat at — o'clock; at other times it is the signal to draw provisions.

The *Surgeon's call* is to sound or beat at — o'clock, when the sick, able to go out, will be conducted to the hospital by the first sergeants of companies, who will

hand to the surgeon a report of all the sick in the company other than in hospital. The patients who cannot attend at the dispensary will be immediately after, if not before, visited by the surgeon.

The *General* is to beat, only when the whole army is to march, and is the signal to strike the tents and prepare for the march.

The *Assembly* is the signal to form by company.

To the color is the signal to form by battalion.

The *March* is for the whole to move.

The *Long Roll* is the signal for getting under arms, in case of alarm or the sudden approach of the enemy.

The *Parley* is to desire a conference with the enemy.

There should be daily, at least three stated roll calls; viz.: at *reveille*, *retreat*, and *tattoo*. They will be made on the company parades by the first sergeants, *superintended by a commissioned officer* of the company. The captains should report the absentees, without leave, to the colonel or commanding officer.

Immediately after *reveille* roll call, (after stable duty in the cavalry,) the tents or quarters, and the space around them, will be put in order by the men of the companies, superintended by the chiefs of squads, and the guard house or guard tent by the guard or prisoners.

The morning reports of companies, signed by the captains and first sergeants, will be handed to the adjutant before eight o'clock in the morning, and will be consolidated by the adjutant within the next hour, for the information of the Colonel; and if the consolidation is to be sent to higher authority, it will be signed by the colonel and the adjutant.

GUARDS AND GUARD-MOUNTING.

On a march continued from day to day, the ceremony of guard-mounting is dispensed with; the men being notified the night before for the next day's guard; and the guards are formed immediately after the army is in camp. On all other occasions the following forms are observed:

At the first call for guard-mounting, the men warned for duty turn out on their company parades for inspection by the first sergeants; and, at the second call, repair to the regimental or garrison parade, conducted by the first sergeants. Each detachment, as it arrives, will, under the direction of the adjutant, take post on the left of the one that preceded it, in open order, *arms* shouldered and bayonets fixed; the supernumeraries five paces in the rear of the men of their respective companies; the first sergeants in rear of them. The sergeant-major will dress the ranks, count the files, verify the details, and when the guard is formed, report to the adjutant, and take two paces on the left of the front rank.

The adjutant then commands ***Front***; when the officer of the guard takes post twelve paces in front of the centre; the sergeants, in one rank, four paces in the rear of the officers; and the corporals, in one rank, four paces in the rear of the sergeants, all facing to the front. The adjutant then assigns their places in the guard.

The adjutant will then command.

1. Officers and non-commissioned officers. 2. About—FACE. 3. *Inspect your guards*—MARCH.

The non-commissioned officers then take their posts. The commander of the guard then commands:

1. *Order*—ARMS. 2. *Inspection of* ARMS;

and inspects his guard. When there is no commissioned officer on the guard, the adjutant will inspect it. During inspection the band will play.

The inspection ended, the officer of the guard takes post as though the guard were a company of a battalion, in open order, under review; at the same time, also, the officers of the day will take post in front of the centre of the guard; the old officer of the day three paces on the right of the new officer of the day, one pace retired.

The adjutant will then command.

1. *Parade*—REST. 2. *Troop—Beat off*;

when the music, beginning on the right, will beat down the line in front of the officer of the guard to the left, and back to its place on the right, where it will cease to play.

The adjutant then commands,

1. *Attention.* 2. *Shoulder*—ARMS.
3. *Close order*—MARCH.

At the word "Close order," the officer will face about; at "March," resume his post in line. The adjutant then commands:

Present—ARMS;

at which he will face to the new officer of the day, sa-

lute, and report, "*Sir, the guard is formed.*" The new officer of the day, after acknowledging the salute, will direct the adjutant to march the guard in review, or by flank, to its post. But if the adjutant be senior to the officer of the day, he will report without saluting with the sword then, or when marching the guard in review.

In review, the guard march past the officer of the day, according to the order of review, conducted by the adjutant, marching on the left of the first division; the sergeant-major on the left of the last division.

When the column has passed the officer of the day, the officer of the guard marches it to its post, the adjutant and sergeant-major retiring. The music, which has wheeled out of the column, and taken post opposite to the officer of the day, will cease, and the old officer of the day salute, and give the old or standing orders to the new officer of the day. The supernumeraries, at the same time, will be marched by the first sergeants to their respective company parades, and dismissed.

In bad weather, or at night, or after fatiguing marches, the ceremony of turning off may be dispensed with, but not the inspection.

Grand guards and other brigade guards are organized and mounted on the brigade parade by the staff officers of the parade, under the direction of the field officer of the day of the brigade, according to the principles here prescribed for the police guard of a regiment. The detail of each regiment is assembled on the regimental parade, verified by the adjutant, and marched to the brigade parade by the senior officer of

the detail. After inspection and review, the officer of the day directs the several guards to their respective posts.

The officer of the old guard, having his guard paraded, on the approach of the new guard, commands:

Present—ARMS.

The new guard will march, in quick time, past the old guard, at *shouldered arms*, officers saluting, and take post four paces on its right, where, being alligned with it, its commander will order:

Present—ARMS.

The two officers will then approach each other and salute. They will then return to their respective guards and command:

1. *Shoulder*—ARMS. 2. *Order*—ARMS.

The officer of the new guard will now direct the detail for the advanced guard to be formed, and marched to its post, the list of the guard made and divided into three reliefs, experienced soldiers placed over the arms of the guard and at the remote and responsible posts, and the young soldiers in posts near the guard for instruction in their duties, and will himself proceed to take possession of the guard-house or guard-tent, and the articles and prisoners in charge of the guard.

During the time of relieving the sentinels and of calling in the small posts, the old commander will give to the new all the information and instruction relating to his post.

The first relief having been designated and ordered two paces to the front, the corporal of the new guard

will take charge of it, and go to relieve the sentinels, accompanied by the corporal of the old guard, who will take command of the old sentinels, when the whole are relieved.

If the sentinels are numerous, the sergeants are to be employed, as well as the corporals, in relieving them.

The relief, with arms at a support, in two ranks, will march by a flank, conducted by the corporal on the side of the leading front-rank man; and the men will be numbered alternately in the front and rear rank, the man on the right of the front rank being No. 1. Should an officer approach, the corporal will command: *Carry arms*, and resume the *support arms* when the officer is passed.

The sentinels at the guard-house, or guard-tent, will be the first relieved and left behind; the others are relieved in succession.

When the sentinel sees the relief approaching, he will halt and face to it, with his arms at a shoulder. At six paces the corporal will command:

1. *Relief*. 2. HALT;

when the relief will halt and carry arms. The corporal will then add, "No. 1," or "No. 2," or "No. 3," according to the number of the post:

Arms—PORT.

The two sentinels will, with arms at *port*, then approach each other, when the old sentinel, under the direction of the corporal, will whisper the instructions to the new sentinel. This done, the two sentinels will shoulder arms, and the old sentinel will pass, in quick

time, to his place in rear of the relief. The corporal will then command:

1. *Support*—ARMS. 2. *Forward*. 3. MARCH;

and the relief proceeds in the same manner until the whole are relieved.

The detachments and sentinels from the old guard having come in, it will be marched, at *shouldered arms*, along the front of the new guard, in quick time, the new guard standing at *presented arms*; officers saluting, and the music of both guards beating, except at the outposts.

On arriving at the regimental or garrison parade, the commander of the old guard will send the detachments composing it, under charge of the non-commissioned officers, to their respective regiments. Before the men are dismissed, their pieces will be drawn or discharged at a target. On rejoining their companions, the chiefs of squads will examine the arms, etc., of their men, and cause the whole to be put away in good order.

When the old guard has marched off fifty paces, the officer of the new guard will order his men to stack their arms, or place them in the arm-racks.

The commander of the guard will then make himself acquainted with all the instructions for his post, visit the sentinels, and question them and the non-commissioned officers relative to the instructions they may have received from other persons of the old guard.

Sentinels will be relieved every two hours, unless the state of the weather, or other causes, should make it necessary or proper that it be done at shorter or longer intervals.

Each relief, before mounting, is inspected by the commander of the guard or of its post. The corporal reports to him, and presents the old relief on its return.

The *countersign* or watchword is given to such persons as are entitled to pass during the night, and to officers, non-commissioned officers, and sentinels of the guard. Interior guards receive the countersign only when ordered by the commander of the troops.

The *parole* is imparted to such officers only as have a right to visit the guards, and to make the grand rounds, and to officers commanding guards.

As soon as the new guard has been marched off, the officer of the day will repair to the office of the commanding officer and report for orders.

The officer of the day must see that the officer of the guard is furnished with the parole and countersign before *retreat*.

The officer of the day visits the guards during the day at such times as he may deem necessary, and makes his rounds at night, at least once after twelve o'clock.

Upon being relieved, the officer of the day will make such remarks in the report of the officer of the guard as circumstances require, and present the same at headquarters.

Commanders of guards leaving their posts to visit their sentinels, or on other duty, are to mention their intention, and the probable time of their absence, to the next in command.

The officers are to remain constantly at their guards, except while visiting their sentinels, or necessarily engaged elsewhere on their proper duty.

Neither officers nor soldiers are to take off their clothing or accoutrements while they are on guard.

The officer of the guard must see that the countersign is duly communicated to the sentinels a little before twilight.

When a fire breaks out, or any alarm is raised in a garrison, all guards are to be immediately under arms.

Inexperienced officers are put on guard as supernumeraries, for the purpose of instruction.

Sentinels will not take orders, or allow themselves to be relieved, except by an officer or non-commissioned officer of their guard or party, the officer of the day or the commanding officer; in which case the orders will be immediately communicated to the commander of the guard by the officer giving them.

Sentinels will report every breach of orders or regulations they are instructed to enforce.

Sentinels must keep themselves on the alert, observing every thing that takes place within sight and hearing of their post. They will carry their arms habitually at support, or on either shoulder; but will never quit them. In wet weather, if there be no sentry-box, they will secure arms.

No sentinel shall quit his post, or hold conversation not necessary to the discharge of his duty.

All persons, of whatever rank in the service, are required to observe respect to sentinels.

In case of disorder, a sentinel must call out, *The Guard!* and if a fire takes place, he must cry "Fire!" adding the number of his post. If, in either case, the danger be great, he must discharge his piece before calling out.

It is the duty of a sentinel to repeat all calls made from posts more distant from the main body of the guard than his own, and no sentinel will be posted so distant as not to be heard by the guard, either directly or through other sentinels.

Sentinels will present arms to general and field officers, to the officer of the day, and to the commanding officer of the post. To all other officers they will carry arms.

When a sentinel, in his sentry-box, sees an officer approaching, he will stand at *attention*, and, as the officer passes, will salute him, by bringing the left hand briskly to the musket, as high as the right shoulder.

The sentinel, at any post of the guard, when he sees any body of troops, or an officer entitled to compliment, approach, must call, "Turn out the guard!" and announce who approaches.

Guards do not turn out, as a matter of compliment, after sunset; but sentinels will, when officers in uniform approach, pay them proper attention, by facing to the proper front and standing steady at *shouldered arms*. This will be observed until the evening is so far advanced that the sentinels begin challenging.

After retreat, (or the hour appointed by the commanding officer,) until broad daylight, a sentinel challenges every person who approaches him, taking at the same time, the position of *arms port*. He will suffer no person to come nearer than within reach of his bayonet, until the person has given the countersign.

A sentinel, in challenging, will call call out, "*Who goes there?*" If answered, "*Friend, with the countersign,*" and he be instructed to pass persons with the

countersign, he will reply. "Advance, friend, with the countersign." If answered, "*Friends,*" he will reply, "*Halt, friends! Advance one with the countersign!*" If answered, "*Relief,*" "*Patrol,*" or "*Grand rounds,*" he will reply, "*Halt! Advance, sergeant (or corporal) with the countersign,*" and satisfy himself that the party is what it represents itself to be. If he have no authority to pass persons with the countersign, he will cause them to stand, and call, "*Corporal of the guard!*"

In the daytime, when the sentinel before the guard sees the officer of the day approach, he will call, "*Turn out the guard! Officer of the day!*" The guard will be paraded, and salute with presented arms.

When any person approaches a post of the guard at night, the sentinel before the post, after challenging, causes him to halt, until examined by a non-commissioned officer of the guard. If it be the officer of the day, or any other officer entitled to inspect the guard, and to make the rounds, the non-commissioned officer will call, "*Turn out the guard!*" when the guard will be paraded at shouldered arms, and the officer of the guard, if he thinks necessary, may demand the countersign and parole.

The officer of the day, wishing to make the rounds, will take an escort of a non-commissioned officer and two men. When the rounds are challenged by a sentinel, the sergeant will answer, "*Grand rounds!*" and the sentinel will reply, "*Halt, grand rounds! Advance sergeant, with the countersign!*" Upon which the sergeant advances and gives the countersign. The sentinel will then cry, "*Advance, rounds!*" and stand at a shoulder till they have passed.

When the sentinel before the guard challenges, and is answered, "*Grand rounds,*" he will reply, "*Halt, grand rounds! Turn out the guard; grand rounds!*" Upon which the guard will be drawn up at shouldered arms. The officer commanding the guard will then order a sergeant and two men to advance; when within ten paces the sergeant challenges. The sergeant of the grand rounds answers, "*Grand rounds!*" The sergeant of the guard replies, "*Advance, sergeant, with the countersign!*" The sergeant of the rounds advances alone, gives the countersign, and returns to his round. The sergeant of the guard calls to his officer, "*The countersign is right!*" on which the officer of the guard calls, "*Advance rounds!*" The officer of the rounds then advances alone, the guard standing at shouldered arms. The officer of the rounds passes along in front of the guard to the officer, who keeps his post on the right, and gives him the parole. He then examines the guard, orders back his escort, and, taking a new one, proceeds in the same manner to other guards.

All material instructions given to a sentinel on post, by persons entitled to make grand rounds, ought to be promptly communicated to the commander of the guard.

Any general officer, or the commander of a post or garrison, may visit the guards of his command, and go the grand rounds, and be received in the same manner as prescribed for the officer of the day.

PICKET GUARD.

The picket guard is stationed at some advantageous

point, in advance of the main body. for the purpose of watching the enemy, to intercept the passage of couriers, or small parties, to give notice of the approach of any considerable force, and to intercept them, if possible, by such a show as will cause sufficient delay to enable the fact to be communicated at headquarters. The strength of a picket guard depends upon the position they are sent to occupy, and the proximity of the enemy. The point occupied should be susceptible of some defence. The picket should be relieved every day; if not, the fact should be known when the guard is posted.

All out guards stand to arms at night on the approach of patrols, rounds, or other parties; the sentinel of the arms will call them out.

The sentinels and videttes are placed on points from which they can see furthest, taking care not to break their connection with each other, or with their post. They are concealed from the enemy as much as possible by walls or trees or elevated ground. It is generally of more advantage not to be seen than to see far. A sentinel should always be ready to fire, and when once satisfied of the presence of an enemy, he should fire, although all defence on his part were useless, since the safety of the post may depend upon it.

PRISONERS.

The prisoners under charge of a guard should not be allowed to hold extended communication with each other, or with the men on guard. They should be forced to maintain the utmost decorum, and a disturbance of any kind should be checked at once by the

application of the most efficient means. On the march the prisoners are placed in charge of the old picket guard, with bayonets fixed and arms loaded. They march in the centre of the regiment. On reaching camp, they are turned over to the new guard as soon as posted.

FORM OF GUARD REPORT.

Report of a Guard mounted at ——, on the ——, and relieved on the ——.

	Lieutenants.	Sergeants.	Corporals.	Musicians.	Privates.	Total.	Aggregate.	Articles in Charge.					Rec'd the foregoing articles: A. B., *Lieut. 1st Regiment.*
Parole.													
Detail.													

LIST OF PRISONERS.

No.	Names	Company.	Regiment.	Confined. When.	Confined. By whom.	Charges.	Sentences.	Remarks.
1								
2								
3								
4								
5								

A. B. C.,
Lieutenant 1st Regiment,
Commanding the Guard.

LIST OF THE GUARD.

Reliefs, when posted.

	1st Relief. From —— to —— and —— to ——			2d Relief. From —— to —— and —— to ——			3d Relief. From —— to —— and —— to ——			Where posted.	Remarks.
No	Name.	Co.	Rt.	Name.	Co.	Rt.	Name.	Co.	Rt.		
1	C. D.	A.	1st.	I. J.	D.	2d.	O. P.	G.	8th.	G'd House	
2	E. F.	B.	4th.	K. L.	E.	2d.	Q. R	H.	9th.	Magazine.	
3	G. H.	C.	6th.	M. N.	F.	5th.	S. T.	I.	10th.	Q'r. Store	
1	Sergeant W. V., Co. A., Regiment.									Serg't G'd.	
2	Corporal W. X., Co. B, "									Corp'l. "	
3	Corporal Y. Z., Co. C, "									" "	

DICTIONARY.

A.

ABATIS (*French*).—Rows of felled trees, sharpened to a point, used for defense.

ABSENCE, with Leave.—Permission given to be absent from post or service.

ACCOUTREMENTS.—Black leather belts.

ADJUTANT.—An officer selected by the colonel to assist him.

ADJUTANT-GENERAL.—The chief assistant of a commanding general.

ADOBE.—Unburnt bricks, used to build defenses in New Mexico.

ADVANCED.—Any portion of an army which is in front of the rest.

ADVANCE GUARD.—A detachment of troops which precedes the march of the main body.

AFFAIR.—Any slight action or engagement.

ALARM-POST.—Place appointed for every regiment or detachment to assemble in case of sudden alarm.

AMBULANCES.—Flying hospitals, used on the battle-field.

AMBUSCADE.—A body of men lying in wait to surprise an enemy.

AMMUNITION.—Gunpowder, projectiles, and pyrotechnic compositions used in the army.

APRON.—A piece of sheet lead used to cover the vent of a cannon.

ARM.—Infantry, artillery, and cavalry are arms of the service.

ARMISTICE.—A temporary truce, or suspension of hostilities.

ARMORER.—The person who makes, cleans, or repairs arms.

ARMORY.—A manufactory or place of deposit for arms.

ARMY.—It is an assemblage of agents and instruments proper and necessary to carry on war abroad, or suppress insurrection and repel invasion at home.

ARMY REGULATIONS.—A book so called, published in the name of the President of the United States.

ARSENAL.—A place of deposit for ordnance and ordnance stores.

ARTICLES OF WAR.—Rules made to govern all attached to an army.

ARTIFICERS.—Military workmen; two allowed to each company of artillery.
ARTILLERY.—An arm of the service designed to use mountain, field, and heavy ordnance.
ASSAULT.—An attack on a garrison or an army.
ASSEMBLY.—Drum beat to order troops to assemble.
ASSIGNMENT.—The senior officer who commands detachments on the march.
ASTRAGAL.—Small convex molding used in ordnance.
ATTACK.—To combat with force.
ATTENTION.—Cautionary command addressed to troops.
AWARD.—The decision of a court-martial.

B.

BAGGAGE.—Equipments of an army to be transported.
BALKS are joist-shaped spars, with rest between the cleats upon the saddle of two pontons, to support the chess or flooring of a bridge.
BALLISTICS is that branch of gunnery which treats of the motion of projectiles.
BAND.—Enlisted soldiers, forming a band of musicians, under the direction of the adjutant.
BANQUETTE is the step of earth within the parapet, for soldiers to stand on to fire over it.
BARBETTE.—Guns are said to be in barbette when they are elevated, by raising the earth behind the parapet, or by placing them on high carriages, so that, instead of firing through embrasures, they can be fired over the crest of the parapet.
BARRACKS are buildings erected for lodging troops.
BARRICADES are obstructions placed in highways or buildings to form a temporary fort.
BARRIER.—Carpentry obstructions in fortifications.
BASE OF OPERATIONS.—That secure line of frontier from which forward movements are made, supplies furnished, and upon which troops may retreat.
BASTION.—A work consisting of two faces and two flanks, all the angles being salient.
BAT-MEN.—Men who take charge of the baggage of officers and companies.
BATARDEAU is a strong wall of masonry built across a ditch, to sustain the pressure of the water.
BATTALION.—An aggregation of from two to ten companies in the United States service.
BATTERY.—Two or more pieces of artillery in the field.

BATTERY (en-barbette).—Guns elevated on carriages over the parapet.
BATTERY (ambulant).—Heavy guns mounted on traveling carriages.
BATTERY (covered).—Intended for vertical fire, and concealed from the enemy.
BATTERY (breaching).—Joint batteries uniting their fire against any object.
BATTERY (counter).—One battery opposed against another.
BATTERY (coast).—Direct battery.
BATTERY (cross).—Forming a cross fire on an object.
BATTERY (oblique).—Forming an angle of 20° or more.
BATTERY (raised).—One whose terre-plein is elevated considerably above the ground.
BATTERY (sunken).—Where the sole of the embrasures is on a level with the ground, the gun platforms being below it.
BATTERY (enfilading).—When the shot or shell sweeps the whole length of a line of troops, or part of a work.
BATTERY (horizontal).—When the terre-plein is level with the ground.
BATTERY (open).—Without epaulment or coverings, exposed.
BATTERY (à crémaillère).—With salient angles, for obtaining an oblique as well as direct fire.
BATTERY (reverse).—That which fires upon the rear of a work.
BATTERY (ricochet).—Whose projectiles being fired at low angles, graze and bound without being buried.
BATTERY (masked).—Artificially concealed, until required to open upon the enemy.
BATTERY WAGON.—A wagon accompanying each field battery.
BATTLE.—A contest between two forces.
BAYONET.—A spear attached to the bagral of a musket.
BAYONET-SWORD.—A sword attached to the barrel of a rifle or rifle musket.
BERME.—A narrow path round fortifications, between the parapet and the ditch, to prevent the earth from falling in.
BILLET.—Compelling citizens, by law, to feed and quarter troops; billeting troops upon citizens.
BED.—Straw and bedsacks used by soldiers; bed for a mortar; bed of a gun-lock.
BLACKING.—A preparation for coloring belts, harness, etc., composed of three ounces of molasses, one ounce of ivory black, one ounce muriatic acid, one ounce sulphuric acid, and a spoonful of olive oil.

BLACKING (liquid, for shoes).—Three parts of white wax, seven and a half parts essence of turpentine, one and a half parts of ivory black. The wax cut in small pieces, and put in a glazed vessel. Spread the turpentine over it, and leave it for 24 hours. Then mix it by degrees.

BLINDAGE.—A siege work constructed as a shelter against a cross or ricochet fire of artillery; also to guard against the effect of shells.

BLOCK-HOUSE.—A redoubt of logs; a common defense against Indians.

BOARD.—Any organization of officers for a special purpose, as Ordnance Board.

BOMB.—The shell thrown by a mortar is called a bomb-shell; the shelters made for magazines, etc., should be bomb-proof.

BOMBARDMENT.—A shower of shells and other incendiary projectiles.

BOOKS (regimental) are—1, general order; 2, regimental order; 3, letter-book; 4, index of letters; 5, size or descriptive book; 6, monthly returns.

BOOKS (company).—1, descriptive; 2, clothing-book; 3, order-book.

BOOM.—Is a frame of wood stretched across a river, sometimes sunk, to prevent the entrance of a hostile fleet.

BOOTY.—What is lawfully taken in capture.

BOUNTY.—A payment as a premium, given to soldiers to enlist or re-enlist.

BAYAU.—A small trench leading to a magazine.

BREACH.—Rupture made in a fortification.

BREACH OF ARREST.—An officer leaving his confinement before he shall be set at liberty.

BREAK GROUND.—To commence the siege of a place by opening trenches.

BREASTWORK.—A hastily-constructed parapet.

BREECH.—The mass of solid metal behind the bottom of the bore of a gun.

BREVET.—A commission in the army at large.

BRICOLES.—Harness for men to drag guns with, when horses can not be used. Eighteen feet long.

BRIDGE.—Portable structures to convey troops over rivers, creeks, and ravines.

BRIDGE (ponton).—Floats, made boat-shaped, of wood, copper, tin, or gutta percha.

BRIDGE-BOAT.—Are boats chained together by their sides to afford a passage across a river.

BRIDGE-FLYING.—For swift currents, made of boats, secured side by side.

BRIDGE (timber).—A structure of timber, the upper portion overhanging, to admit of a single stick to complete.
BRIDGE-HEAD (la tête du pont).—Is a small fort, constructed to cover a bridge, to protect a retiring army.
BRIDOON.—The snaffle and rein of a military bridle.
BRIGADE.—Two regiments of infantry or cavalry.
BRIGADIER-GENERAL.—Rank next below major-general, commander of a brigade.
BRIGADE-MAJOR.—An officer appointed to assist the general commanding a brigade in all his duties.
BUNK.—A word used in the army, a place for bedding.
BUREAU.—Departments in the war department.
BURIAL.—Funeral honors paid to deceased officers and soldiers.
BUSHING A GUN is drilling a hole in a gun, and inserting a piece of metal for a new vent.

C.

CADET.—A warrant officer. Students at West Point Military Academy are cadets of the engineer corps.
CAISSON.—A wagon attached to a battery to carry powder and ball.
CALIBER.—The caliber of bullets is determined by the *number* required to weigh a pound. The caliber of guns is designated by the weight of the shot; siege and sea-coast howitzers, columbiads, and mortars, by the number of inches of their respective diameters.
CAMONFLET.—A small mine of about ten pounds of powder.
CAMP.—The temporary repose for troops.
CAMPAIGN.—The period of a year that an army keeps the field.
CANISTER.—For field service, consists of a tin cylinder attached to a sabot, and filled with cast-iron shot. For siege and garrison guns, the bottom is of cast iron, and the cover of sheet iron, with a handle made of iron wire.
CANTEEN.—A small tin, India-rubber, or wooden vessel, used by soldiers to carry water, liquor, etc., in.
CANTONMENTS.—Troops quartered in towns and villages.
CAPITAL.—The line drawn bisecting the salient angle of a work.
CAPITULATION.—Articles of agreement, by which besieged troops surrender at discretion, or with the honors of war.
CAPONNIERE.—A passage from a fort to an outwork.
CAPS.—Percussion caps for small arms are formed by a machine which cuts a star or blank from the sheet of copper,

and transfers it to a die, in which the cap is shaped by means of a punch. The powder with which caps are charged consists of fulminate of mercury, mixed with half its weight of saltpeter.

CAPTAIN.—Rank in the army between major and first lieutenant, charged with the arms, accoutrements, ammunition, clothing, or other warlike stores belonging to the troops or company under his command.

CARBINE.—A cavalry weapon, in weight and length between rifle and pistol, and usually breech-loading.

CARCASS.—Combustible composition, encased in globes, formed with iron hoops, canvas, and cord, of an oblong shape, and thrown from mortars, used in bombardments and firing shipping.

CARPENTRY.—That part of roof and bridge work distinguished from joiners' work, being put together by using axe, adze, saw, and chisel.

CARTE-BLANCHE.—A blank paper sent to a person to fill up with such conditions as he thinks proper to insert.

CARTEL.—An agreement between two hostile powers for a mutual exchange of prisoners.

CARTRIDGES.—Powder and projectiles.

CASCABLE.—A part of the gun in rear of the base ring.

CASEMATE.—Vaulted chamber, with embrasures for guns.

CASE-SHOT.—Small balls inclosed in a case or envelope, which, broke by the discharge, or by a charge of powder within them, scatter the balls.

CASHIERED.—Dismissal from the service by the sentence of a court-martial.

CASTRAMETATION.—The art of encampment.

CASUALTIES.—Applied to all soldiers who desert, die, or are discharged.

CAVALIER.—A fortification of more than ordinary height.

CAVALRY.—Mounted troops.

CAVALRY TACTICS.—Instruction for mounted troops.

CHAIN-BALL.—A chain attached to a conical shot, to compel its movement point forward.

CHAIN-SHOT.—Two shot chained together, used for cutting masts, rigging of vessels, etc.

CHALLENGE.—A communication between two parties to fight.

CHAMADE.—A signal for parley, by beat of drum.

CHAMBER (of a mine).—A cell of cubical form, to receive the powder.

CHAMBER (of guns).—Chambers of howitzers, columbiads,

and mortars, is the smallest part of the bore, and contains the powder.

CHAPLAIN.—Minister of the Gospel attached to an army.

CHARGE.—The impetus of an army on the attack. The attack of cavalry. Written documents preferred before a court-martial.

CHARGER.—The horse rode by an officer in the field or in action.

CHASE.—The conical part of a piece of ordnance, in front of the reinforce.

CHASSIS.—A traversing carriage. A T rail for casemate and barbette guns to travel on.

CHEMIN DES RONDES.—A slope in front of the parapet.

CHESSES.—Platforms which form the flooring of bridges.

CHEVAUX-DE-FRISE.—A temporary structure to stop a breach or impede the advance of cavalry.

CIRCUMVALLATION.—Works made by besiegers around a besieged place.

CITADEL.—A small fort, a refuge for the garrison.

COEHORN MORTAR.—Brass 24-pounder mortar, weighing 164 pounds.

COLONEL.—Rank in the army between brigadier-general and lieutenant-colonel.

COLORS.—The insignia of the regiment.

COLUMBIAD.—An American cannon, invented by Colonel Bumford, of very large caliber, used for throwing solid shot or shells, which, when mounted in barbette, has a vertical field fire from 5° depression to 39° elevation, and a horizontal field of fire of 360°; 10-inch weighs 15,400 pounds, and is 126 inches long; 8-inch weighs 9,240 pounds, and is 124 inches long.

COLUMN OF ATTACK.—The attack of troops when moving in column.

COLUMN IN ROUTE.—The march of troops on the high-roads, when the cadenced step is not used.

CLOSE COLUMN.—A company or division being in rear of and within five paces of another.

COLUMN OF DIVISION.—One division being in rear of an other.

COLUMN AT HALF DISTANCE.—When the division or company are in rear of and at half their front distant.

COLUMN OPEN.—When the division or company is in the rear of and at its full front distant.

COMMAND.—The power invested by virtue of orders and office.

COMMAND-OF-FIRE. — When a fort is higher than the enemy's.
COMMANDER-IN-CHIEF.—The supreme and highest officer.
COMMANDER-OF-THE-ARMY.—An officer delegated with power of chief command.
COMMISSARY OF SUBSISTENCE.—An officer of the subsistence department.
COMMISSION—Authority from a supreme officer by virtue of a written document.
COMPANY.—An organization of military commanded by a captain.
CONSCRIPTION.—Forced method of raising armies.
CONTRACTS.—Agreement for purchases and sales in the army.
CONVOYS.—Armed vessels accompanying unarmed transports and merchant vessels, transportation of supplies, etc., for troops.
CORDON.—The coping of the escarp or inner wall of the ditch.
CORPORAL.—Grade between private and sergeant.
CORPS.—A regiment is a corps—an independent company is a corps.
COUNCIL OF ADMINISTRATION.—A board appointed by Government under the act of July 5th, 1838, to employ persons to act as chaplain and schoolmaster.
COUNCIL-OF-WAR.—An assemblage of the chief officers of the army.
COUNSEL.—All writers admit it to be the custom to allow a prisoner to have counsel. The laws of the State of New York give a prisoner the right of counsel.
COUNTER-BATTERY.—A number of guns placed behind a parapet.
COUNTERFORTS.—Buttresses by which the revetment walls are backed.
COUNTERGUARD.—A work composed of two faces, forming a salient angle, placed before a bastion.
COUNTERMINES.—Galleries excavated by defenders, to approach the mines and destroy the works of besiegers.
COUNTERSCARP.—The outer boundary of the ditch.
COUNTERSIGN.—A particular word used between guards and sentinels.
COUNTERSLOPE.—Steps within the fort, to revet the parapet.
COUP D'ŒIL.—Distinguishing at a glance the weak points of the enemy.
COUP DE MAIN.—A sudden and vigorous attack.
COURT-MARTIAL.—A body of officers appointed to investigate charges against an officer.

COURT OF INQUIRY.—An assemblage of officers to inquire into the nature of transactions or accusations against officer and soldier.

COVERED WAY.—A space between the counterscarp and the crest of the glacis in permanent works.

COWARDICE.—Desertion in the face of the enemy.

CRATER OF A MINE.—The excavation formed in the ground by the explosion of the powder.

CREMAILLERE.—An indented or zig-zag outline.

CRENNELATED.—Loop-holed.

CRIMES.—Disorders and neglects; prejudice to good order and military discipline.

CROTCHETS.—Openings cut in the glacis at the head of the traverse.

CROWNING.—A lodgment prepared by besiegers upon the crest of the glacis, to make themselves master of the covered way.

CROWN-WORK.—Similar work to horn-work, with two fronts instead of one.

CROWS'-FEET.—Iron-pointed stars, or stout nails, strewed on the ground, and so fixed as to impede the movement of cavalry.

CUNETTE.—A narrow ditch in the middle of a dry *ditch, to* keep it drained.

CURTAIN.—That part of a rampart which lies between two bastions, and which joins their two flanks.

CURTAIN ANGLES.—That formed by the meeting of the flank and the curtain.

CUSTOM OF WAR.—Common law of the army.

D.

DAM.—An impediment formed of stones, gravel, and earth.

DEAD ANGLE.—An angle or piece of ground which can not be seen.

DEBLAI.—The earth which is excavated from the ditch to form the remblai.

DECISIONS.—The result of investigations, when reported.

DEFENSE.—Resistance to attack. Evidence presented by prisoners on trial.

DEFILADING.—Raising the parapets of a fortress or field-work.

DEFILE.—Any narrow passage, as a ford, a bridge, a road, mountain passes, etc.

DEMILUNE.—A work constructed to cover the curtain and shoulders of the bastion.

DEPARTMENT.—A branch of an army distinct within itself, yet connected with the army proper.
DEPARTMENT OF WAR.—Where all war and army action emanate.
DEPLOYMENT.—Movements of troops from column into line of battle.
DÉPOT.—A place for the reception of arms, ammunition, and ordnance stores.
DERRICK.—A spar, or spars, in an oblique position, to raise heavy weights with.
DETACHED BASTION.—Separated from the enciente by a ditch.
DETACHED WORKS.—Works constructed beyond the range of musketry.
DETACHMENT.—A body of troops, or an entire corps, charged particularly with functions which are dependent for their duration upon circumstances, in war or actual service.
DETAIL FOR DUTY.—Roster or table, for the regular performance of duty either in camp or garrison.
DIMINISHED ANGLE.—That formed by the exterior side and the line of defense in fortifications.
DISBURSING OFFICERS.—Officers appointed by law to make contracts and payments.
DISCHARGE.—A document in writing, absolving the soldier from the service.
DISCIPLINE.—The morale of an army. The proper execution of military law and regulation.
DISEMBARKATION.—The landing of troops from ships or transports.
DISMISSION.—Disgraceful discharge of an officer or soldier.
DISMOUNT.—To relieve guard; to assign cavalry to infantry duty; to take a gun from its carriage.
DISOBEDIENCE OF ORDERS.—A violation or refusal to obey the order of a superior.
DISPART.—Difference of the semi-diameter of the base-ring and swell of the muzzle of a gun.
DISTANCES.—A computation of time and travel.
DISTRIBUTION.—A division or allotment to corps.
DITCH.—Excavation around a fort, in front of it.
DIVISION.—Two brigades. In a regiment, two companies.
DOMICILE.—The last residence of a soldier ere his enrollment.
DRAGOONS.—A species of mounted troops.
DRAG-ROPE.—A four-inch rope, with a hook and handles to extricate gun-carriages from difficult positions.
DRILL.—The maneuvers and tactical exercise of troops.

DUTY.—Special labor assigned to troops. The tour of duty is from the eldest downward. Brigade duties are those performed by one regiment in common with another. Regimental duties are those performed by the officers and companies of a regiment among themselves.

E.

ECHELON.—An arrangement of battalions or companies, so that each has a line of battle in advance or rear of its neighboring battalion.

ELEVATION.—Shows the height or depth of a work, and also its length, when the plane of projection is parallel to its face.

EMBARKATION.—The transportation of troops into transports and gun-ships.

EMBRASURE.—An opening cut through the face of a fort or parapet, to point guns through.

ENCIENTE.—The body of the place, or the first belt of ramparts and parapets that inclose the place.

ENFILADE.—To sweep the whole length of the face of any work or line of troops, by a battery on the prolongation of that line.

ENGINEER CORPS.—A corps under the direct control of the President. Their duty is planning, constructing, and repairing all fortifications and other defensive work. In time of war, they present plans for attack and defense of military works, lay out and construct field defenses, redoubts, intrenchments, roads, etc.

ENGINEERS (topographical).—A corps for making surveys for defenses and positions for fortifications.

ENLISTMENT.—A voluntary obligation of a soldier with government for a term of years.

ENSIGN.—Lowest grade of commissioned officer.

ENTANGLEMENT.—Abatis, so called by cutting at the base and throwing the branches of trees to the ground.

EPAULMENT.—An elevation thrown up to cover troops from the fire of an enemy.

EPAULETTE.—Badge of rank, worn by officers on the shoulder.

EPROVETTE.—A pendulum for proving samples of powder. The apparatus shows the initial velocity of a ball fired from a cannon or musket.

EQUIPAGE (camp and garrison).—Tents, kitchen utensils, axes, spades, etc.

EQUIPMENT.—The complete dress of a soldier, including arms, accoutrements, etc.
ESCALADE.—To climb the walls of a fort, with the aid of ladders.
ESCARP.—Is the side of the ditch next to the place.
ESCORT.—Honors paid by troops at funerals, to the colors, and to distinguished persons.
ESPLANADE.—Empty space for exercising troops in fortified places.
ESPRIT DU CORPS.—Military pride of organizations.
EVACUATE.—To withdraw from a town or fortress.
EVIDENCE.—That which makes clear the truth of the fact or point in issue.
EXPEDITION.—An enterprise undertaken either by sea or land against an enemy.
EXPENSE MAGAZINE.—Are small powder magazines, containing ammunition, etc., made up for present use.
EXTERIOR SIDE.—The side of the polygon, upon which a front of fortification is formed.

F.

FACE OF A GUN.—The superficies of the metal at the extremity of the muzzle.
FACES OF A BASTION.—The two sides extending from the salient to the angle of the shoulder.
FACES OF A SQUARE.—The sides of a battalion when formed in square.
FACINGS.—The movements of soldiers to the right, left, right about, left about, etc.
FARRIER.—Attached to cavalry regiments.
FASCINES.—Long cylindrical fagots of brushwood for supporting earth-work for temporary forts.
FATIGUE DUTY.—An extra duty assigned to soldiers, for which they are allowed an extra gill of whisky.
FAUSSE BRAIE.—Is a second enceinte, exterior to and parallel to the main rampart, considerably below its level.
FIELD.—The scene of a campaign or battle.
FIELD-DAY.—Instruction of regiments in the field, in the exercises and evolutions.
FIELD-WORKS.—Temporary earth-works to protect troops.
FIELD-MARSHAL.—The highest military rank, except that of captain-general.
FIELD-OFFICERS.—Colonel, lieutenant-colonel, and major.
FILE.—Two soldiers, a front and rear rank man.
FIRE (direct).—Perpendicular to the face of the line or work.

FIRE (enfilade).—Parallel to the face of the line or work.
FIRE (oblique).—At an angle with the line or work.
FIRE (plunging).—Firing from a higher position than the object aimed at.
FIRE (ricochet).—Firing with a slight elevation, and with small charges, so as to bounce the shot.
FIRE (vertical).—Mortars fire the shell vertical or with a curve.
FIRE-BALL.—Made of pyrotechnics, loaded with a shell.
FIRING.—Discharge of fire-weapons.
FLAG.—The insignia of the United States, consisting of thirteen horizontal stripes of bunting, red and white alternated. the Union to be a star for each State on a blue field.
FLAG OF TRUCE.—A flag sent by an enemy, as a peaceful mission.
FLANK.—The right or left side of a body of men or place.
FLANK OF A BASTION.—That side which connects the face and curtain.
FLECHE.—A simple species of field-work.
FOOT.—In military, implying infantry soldiers.
FORAGE.—Food required to subsist the horses of the army.
FORAGING.—A body of troops detailed to procure food for horses.
FORCES.—Any body of troops.
FORDS.—Passages selected to cross creeks, rivers, and streams.
FORGE.—A portable furnace, for smiths' purpose, attached to a battery.
FORLORN HOPE.—A force who volunteer for a *desperate* enterprise.
FORT.—An inclosed work of the higher class of field-works.
FORTIFICATIONS.—Applies to all constructions of earth-work for permanent or temporary defense. They are of three kinds—irregular, when the ground will not admit of regularity in their plan of construction; natural, when the topography of ground assists in its defense; and regular. when they are constructed on a regular polygon, all the corresponding parts being equal with each other.
FORTRESS.—A fortified city or town.
FOUGASS.—Charges of powder placed in a pit in the ground over which an enemy must pass.
FRAISES.—Palisades placed horizontally or obliquely at the edge of a ditch on either side.
FRICTION PRIMER.—A tube charged with powder, with a cup in the top, containing friction powder, composed of two parts chlorate of potassa and one part solution of antimony. Exploded by means of a slider pulled with a lanyard.

FURLOUGHS.—Leave of absence granted to officers and soldiers for a given time.

FUSE.—Means used to ignite shells. They are classed as time, concussion, and percussion fuses.

G.

GABIONADE.—A work constructed with gabions.

GABIONS.—Cylindrical baskets of various dimensions, open at both ends, used to make embrasures and parapets to temporary field-works.

GALLERY.—In forts, a passage to the mine where the powder is kept.

GARRISON.—A strong military headquarters.

GENERAL OFFICERS.—All officers above the rank of colonel.

GEOMETRY.—The science which teaches the dimensions of lines.

GIN.—Similar to derrick, a spar used for hoisting heavy weights.

GLACIS.—The slope from the parapet of a fort to the surrounding country.

GLANDERS.—A virulent disease among horses.

GORGE.—An open space of earth-work in the parapet of a fort.

GORGE OF MOUNTAIN.—A passage or defile between two mountains or hills.

GRAND DIVISION.—A division of two companies in battalion maneuvers.

GRAPESHOT.—Cast-iron balls, put together by means of two cast-iron plates, two rings, one pin, and a nut. Grapeshot are used with 8-inch howitzers.

GRAPPLING-IRONS.—Four or six branches bent, and pointed with a ring at the root, with a rope attached; they are used for grappling.

GRENADE.—A shell thrown by hand or in baskets from stone mortars. A hand grenade is a small shell, about two and a half inches in diameter, has a short fuse, is set on fire, and can be thrown about twenty yards.

GRENADIERS.—Right flank company of a regiment.

GROOVES.—Spiral slits cut in rifles, rifle muskets, and cannon, to insure accuracy in the aim, and force in the propulsion.

GUARDS.—Are special forces for special duty. They consist of advance and rear guard, outpost and picket guard, quarter, camp and garrison, and general officers' guard. A tour of guard duty is about twenty-four hours.

GUIDES.—Men used to guide an army through a country. The direction of the march in the battalion.
GUIDONS.—The colors of a cavalry company.
GUN-COTTON.—Cotton steeped in sulphuric and nitric acid.
GUNNERS.—Soldiers who manage field and heavy ordnance; each piece has one man called a gunner, who gives all the commands.
GUNNERS' CALIPERS.—Made of brass, with steel points, to prove the diameter of guns, shot, etc.
GUNNERS' PINCERS.—Iron pincers, with steel jaws, to draw nails with.
GUNNERS' QUADRANT.—A quadrant used for righting the gun.
GUNPOWDER.—A combustible ingredient, made of 76 parts saltpeter, 15 of charcoal, and 10 of sulphur. It is made coarse or fine by passing it through sieves.
GUNS.—Long cannon without chambers.

H.

HAIL.—Challenge by a sentry, "Who goes there?"
HALT.—A rest during a march, a word of command.
HANDSPIKE.—A wooden spike used for moving gun-carriages.
HAVERSACK.—Bag usually made of rubber, to carry soldiers' rations in.
HELMET.—Defensive armor or covering for the head.
HOLSTERS.—Cases attached to the pommel of the saddle, to hold pistols.
HONORS.—Salutes and other respects paid to distinguished persons and prominent officers by virtue of rank.
HONORS OF WAR.—Credit given to a defeated army, who honorably defended themselves, and capitulated.
HORSE EQUIPMENTS.—Everything appertaining to the equipping of a horse for military use.
HOSPITAL.—An institution for the treatment of sick and wounded soldiers.
HOT SHOT.—Shot heated in a furnace, and discharged at ships and houses for combustion. They are covered with a wad made of clay or hay while in the gun.
HOUSINGS.—Cloth covering for saddles.
HOWITZER.—A chambered cannon.
HUSSARS.—Light cavalry.
HUTS.—Quarters constructed by troops when located for the winter.

I.

ICE.—Water frozen. Two inches thick will bear infantry; four inches thick, cavalry or light guns.

INDEMNIFICATION.—Reparation for losses incurred by damage in military or other movements.

INFANTRY.—A military force, which by formation in lines has fitted it for action on all kinds of grounds, and the system of massing, the condensation of ranks, and formation by size, have given it a perfec *ensemble.*

INITIAL VELOCITY.—The force with which a projectile leaves the piece.

INLYING PICKET.—A body of infantry or cavalry in a campaign, held always ready to march.

INSPECTOR-GENERAL.—A special department in the United States Army, with the rank of colonel.

INSURRECTION.—A resistance to the laws of the country.

INTRENCHED CAMP.—A position occupied by troops, and fortified for their protection.

INTRENCHMENT.—A ditch or trench with a parapet.

INVEST.—To besiege and take a town or place.

J.

JUDGE ADVOCATE.—Military counsel in the army.

K.

KNAPSACK.—A square frame, covered with leather or canvas, carried on an infantry soldier's back, containing his clothing.

L.

LANCE.—A sharp steel blade, eight inches long, attached to a staff with two iron straps, and held by a leather loop; it is used by mounted troops.

LAW.—Is a rule of action prescribed by a superior power.

LAW (martial).—Suspension of the civil and the substitute of military power.

LAW (military).—To be applied to all who are attached to the army.

LIEUTENANT.—Rank next below captain.

LIEUTENANT-COLONEL.—Rank next below colonel.

LIEUTENANT-GENERAL.—Special rank above a major-general, only conferred on General Scott for able and distinguished services.

LIMBER.—The fore part of a gun-carriage, to which the horses are attached.

LINES.—A connected series of field-works, whether continuous or at intervals.
LINES CREMAILLERE.—Alternate short and long faces, at right angles to each other.
LINES OF BASTION.—Are formed of a succession of bastion-shaped parapets, each consisting of two faces and two flanks connected together.
LINSTOCK.—A pointed, forked staff, used for lighting fort fires.
LOAD.—Command in infantry and artillery instruction.
LODGMENT.—The occupation of an enemy's position.
LOOP-HOLES.—Apertures formed in a wall or stockade, for firing musketry.
LUNETTES.—Redans having flanks parallel to their capital.

M.

MAGAZINE.—Receptacle for powder.
MAJOR.—Rank below lieutenant-colonel.
MAJOR-GENERAL.—Rank between brigadier-general and lieutenant-general.
MALINGERER.—A soldier who feigns illness to avoid his duty.
MANEUVER.—Movements in infantry, cavalry, artillery, etc.
MANUAL.—Exercises of arms.
MARCH.—The command for troops to move.
MARKER.—Soldier who marks the direction of the line.
MARTELLO TOWERS.—Circular stone buildings, placed on the sea-coast for defense.
MEDICAL DEPARTMENT.—In connection with hospital.
MILEAGE.—Traveling allowance or transportation of baggage.
MINE.—Powder placed in subterranean cavities.
MINUTE-GUNS.—Guns fired at intervals of a minute, are signals of distress.
MORTAR.—Large chamber of iron, to throw shell.
MOUNTED ARTILLERY.—A species of guns, called howitzers, for throwing light shot and canister.
MUSTER.—A report made by commanding officers of regiments and companies, as to the absence and presence of their members.

N.

NON-COMMISSIONED OFFICER.—Grades between private and ensign.

O.

OBLIQUE.—A diagonal or angular direction.
OBSTACLES.—Articles natural and artificial, placed so as to impede the advance of troops.

OFFICER.—All above the rank of a warrant officer.
OPERATIONS.—The action and movements of an army or a detachment.
ORDERLIES.—Non-commissioned officers and soldiers appointed to wait on general and other officers.
ORDERLY SERGEANT.—The first sergeant of a company
ORDERLY BOOK.—A book for sergeants to insert the general and regimental orders from time to time.
ORDERS.—Directions, verbal or written, by a superior officer.
ORDNANCE DEPARTMENT.—Having charge of all the ordnance issued by government.
OUTPOSTS.—Troops in advance of the main body.

P.

PACE.—The length of an infantry soldier's step is twenty-eight inches.
PALISADES.—Pointed sticks at the foot of a slope to a fort, to keep the enemy out.
PARADE.—An assemblage of troops in a regular and prescribed manner.
PARAPET.—The depth of the wall of a fort.
PARK.—Where artillery, horses, wagons, and cattle are placed in camp.
PAROLE.—A word given to sentinels to detect one who has obtained the countersign by fraud. Pledge of honor required of liberated prisoners.
PASS.—A straight, difficult, narrow passage, which, well defended, shuts up the entrance to a country.
PATROL.—A small party detached from a guard to obtain information from the enemy.
PIONEERS.—Soldiers with saws, axes, and spades, detailed for felling trees, making roads, etc.
PIVOT.—That officer or soldier upon whom the company wheels.
PLATFORM.—There are six sleepers, eighteen deck planks, seventy-two dowels, and twelve iron eyebolts used for the platform of a siege mortar.
PLATOON.—The half of a company.
POINT BLANK.—Is the second point at which the line of sight intersects the trajectory of the projectile.
POINTING.—To give a gun the direction, elevation, or depression.
PONTON.—Three rubber cylinders connected together, used as floats, weighing 260 pounds, for making portable bridges.
POST.—The fixed position of a force.
PRIVATE.—Term applied to a common soldier.

PROJECTILES (for unrifled ordnance). Are solid shot and shell.
PROLONGE.—Stout hempen rope, used to connect the lunette of a field-carriage with the limber, when the piece is fired.
PROVOST-MARSHAL.—An officer appointed in every army in the field, to secure prisoners confined on charges of a general nature.

Q.

QUARTERS.—The place where troops are fed and lodged.
QUOIN.—A wedge used to elevate or depress a gun.

R.

RALLY.—To re-form disordered troops.
RAMPART.—A broad embankment round a fortified place.
RAMROD.—A rod of iron attached to a musket, for forcing home the charge.
RANGES.—The distance that a gun or musket will carry.
RANK.—A range of subordination; a degree of dignity.
RATION.—The food which is allowed a soldier for each meal.
REAR RANK.—The hinder rank.
REAR GUARD.—A detachment of troops in rear of an army.
RECOIL.—The motion which a cannon takes backward when fired.
RECONNOISSANCE.—Cautious advances, in order to ascertain the strength of the enemy, or to discover them.
REDAN.—Small works with two faces, terminating in a salient angle.
REDOUBT.—Are square, polygon, or circular field-works.
REDUCE.—To compel a surrender.
REGIMENT.—A body of troops organized by law, consisting of ten companies.
RELIEF.—A species of duty in a guard, so as to prevent the entire force being on duty. The guard is divided into three reliefs.
REQUISITIONS.—Demand made by the proper officers for supplies.
RESERVE.—A select body of troops, for support when needed, or to rally upon.
RETREAT.—Retrograde movement before the enemy; a drum beat at sunset.
REVEILLE.—Drum-beat and roll-call at daybreak.
REVERSE.—Opposite to direct.
REVETMENT.—To tie fast; the inner bank of a parapet.

REVIEW.—A display of troops before a general officer or illustrious personage.
RIFLED ORDNANCE.—Guns, muskets, etc., of the new pattern are rifled, by having a winding groove cut in the chamber or barrel, to give velocity and accuracy to the shot.
RIFLE PITS.—Holes or short trenches, for men to hide from view.
ROSTER.—List of officers for duty.
ROUNDS.—The tour of duty an officer makes in visiting his guards, outpost and advanced guard.
ROUT.—To defeat and throw into confusion.
ROUTE.—Open road; the march of troops.
RUFFLE.—A low, vibrating sound on a drum, not so loud as a roll.

S.

SABER.—An officer's and mounted troops' sword.
SABOT.—A block of wood fixed to a solid shot or canister.
SAFEGUARD.—Protection to loyal persons.
SALIENT.—Angle of a fort projecting toward the country.
SALLY.—A movement made by a strong detachment.
SALLY PORTS.—Openings made in forts for the free egress of troops.
SALUTE.—A discharge of artillery as a compliment, beating of drums, presenting of arms, or drooping of colors.
SAND-BAGS.—Bags filled with earth, from twelve to fourteen inches wide, and thirty inches long.
SAPPERS.—A company attached to the engineer corps of the army.
SASH.—A mark of distinction worn by officers round the waist.
SCOUTS.—Horsemen sent in advance, or on the flanks, to give information.
SENTRY.—A special guard, to watch all who may be moving.
SERGEANT.—Non-commissioned officer above corporal.
SHELL.—A hollow shot, with a hole to receive the fuse.
SHOT.—Made of cast iron, used as a projectile, when great range, accuracy, and penetration are required.
SIEGES.—An army engaged in attacking a fortified city or town.
SIGHT.—A small piece of brass or iron, fixed on a gun at its muzzle, to serve as a point of direction.
SIGNAL.—To make signs; to attract the attention of your party by understood signs.

SIGNAL-OFFICER.—One attached to the staff of the army, who has charge of all signal-books.
SKIRMISH.—A loose, desultory engagement.
SLING-CARTS.—Two wheels, an axle-tree, and tongue, used to transport guns.
SOLDIER.—Whoever belongs to the military service of the State, and receives pay, is a soldier.
SORTIE.—An attack by a besieged garrison.
SPHERICAL-CASE SHOT.—Consists of a thin shell of cast iron, containing a number of musket-balls and a charge of powder sufficient to burst it. The kind used are 12-pounders, and contain 90 bullets.
SPIKE.—To drive a nail or file in the vent of a cannon.
SQUAD.—A small party of men.
SQUADRON.—Two companies or troop of cavalry.
SQUARE.—A body of infantry, so formed as to repel an attack of cavalry.
STAFF.—The assistants of a general officer and a colonel of a regiment. Department officers.
STANDARD.—Banners and flags used and honored by regiments.
STOCKADE.—Trunks of trees used as a substitute for field-works.
STORM.—To make a vigorous assault.
STRAGGLERS.—Individuals who wander from the line of march.
STRATAGEM.—A scheme or plan devised to deceive the enemy.
STRATEGY.—Movements beyond the reach of the enemy's guns.
SUPERNUMERARY.—Substitute officers, graduates of the Military Academy.
SUPPLIES.—All which pertain to feeding, clothing, transporting, and equipping the army.
SURGEON.—A staff officer of the medical department.
SUTLER.—An attache of the army, with regulations to sell small wares to soldiers.
SWORD.—A weapon used by officers.

T.

TACTICS.—The handling of troops in presence of the enemy.
TAMBOUR.—A stockade or timber wall, with loop-holes for musketry.
TAMPION or TOMPION.—A wooden plug used to stop the bore of a field-piece.
TANG.—The projection of a musket-barrel which secures it to the stock.

TARGET.—A mark to fire at, to test the skill of a soldier.
TATTOO.—Drum beat at night.
TEAMSTERS.—Persons attached to an army as non-combatants, used as drivers.
TERRE-PLEIN.—A level space on the ramparts.
TETE-DU-PONT.—A field intrenchment covering a bridge.
TIER SHOT.—Grapeshot so called.
TIGE ARMS.—Arms with a stem of steel in the middle of the breech-pin, around which the charge of powder is placed.
TOPOGRAPHY.—The art of representing and describing the actual condition of a country by surveys and maps.
TRAIL HANDSPIKE.—A rod used for moving field-carriages.
TRAIN.—Teams and artillery, with their horses.
TRAVERSES.—Portions of parapets, which cross the breadth of the covered way.
TRENCH.—An opening in the ground about three feet deep, ten feet wide, made by besiegers against a fortification.
TRESTLE.—A horizontal beam, supported by four legs.
TRIGGER.—An appliance to a musket, which, being pulled, causes it to explode when loaded.
TROOP.—A company of cavalry.

U.

UNDRESS.—Not full uniform; known as fatigue dress.
UNIFORM.—Prescribed dress.
UNMILITARY.—Contrary to rules of discipline.

V.

VAN-GUARD.—Advanced guard.
VEDETTES.—Sentries on outposts, so placed that they can best observe the movements of the enemy, and communicate by signal to their respective posts and with each other.
VENT.—The opening or passage in firearms by means of which the charge is ignited.
VETERAN.—An old soldier.

W.

WAD.—Ring-wads, made of rope yarn, increase the accuracy of the fire.
WARRANT.—A writ of authority. Warrant officers are such as are immediately below commissioned officers, exercising their authority by warrant only. Cadets are warrant officers.
WINDAGE.—The true difference between the diameter of the piece and the ball.
WINGS.—The right and left divisions of an army; the right and left of a regiment or camp.

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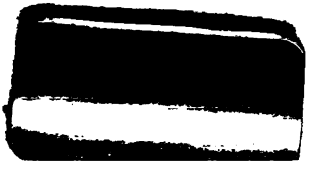
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